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Prof. Ezekial's Theory on Pine Paper Answered

Dr. Chas. H. Herty, Director of the Savannah Pulp and Paper Laboratory, Says "If the Professor Has in Mind the Prevention of the Development of the Newsprint Industry in the Southeast, He Had Better Get Off the Track Because a Locomotive Is Approaching Him Under Full Steam and Cannot Be Held"

The *Savannah News* in its issue of June 4 printed the following:

"The so-called policy of the United States Department of Agriculture, framed by Prof. Mordecai Ezekial, economic adviser to the Secretary of Agriculture, in regard to the development of the new pine paper industry in the South, has been strongly criticized by Dr. Charles H. Herty, director of the Pine Paper Pulp Laboratory, and the Georgia members of congress.

"Prof. Ezekial's theory as published in Sunday's *Atlanta American*, is that the South must not develop its news pine paper industry, which would mean that the $170,000,000 spent for newsprint abroad would be kept at home, because the exports of wheat and hogs would be seriously affected, as the nations from which we now buy this paper would lack the money to buy these farm commodities. 'The products which we import into this country produce dollars to pay for the products we export. We face an acute problem in farm readjustment because of reduction in export demand for wheat and hogs. If we take still further steps to reduce our imports, the ability of foreign countries to buy will be correspondingly reduced and in the end will merely intensify our farm readjustment problem,' Prof. Ezekial said. 'For this reason we cannot agree that it is to the advantage of the farmers to adopt arrangements such as you propose.' (Meaning the proposal recently laid before the President by the Chemical Foundation to make the United States self-sufficient in the newsprint and wood paper industry, by utilizing the pine tree in its production.)

"Dr. Herty in a wire to the Atlanta paper stated that 'if Professor Ezekial has in mind the prevention of the development of the newsprint industry in the southeast he had better get off the track because a locomotive is approaching him under full steam and cannot be held.' The Georgia members in Congress will hold a caucus this morning to determine just what steps should be taken.

"The noted chemist who has already beaten down every argument presented against the establishing of the pine paper industry in the South, seemed a bit surprised at the unexpected attack of the 'brain truster' and with a broad smile yesterday declared that he liked a fight. Point by point Dr. Herty tore down the astounding theory offered by Professor Ezekial.

"Dr. Herty said that the announcement of policy from the farmer's own branch of the government is against the interest of the farmer. He declared that of the $170,000,000 spent for foreign newsprint yearly by the United States that $150,000,000 was bought from Canada, and just how our exports of wheat to Canada, the largest wheat-growing country in the world, could be affected was evidently unexplained. Dr. Herty said that our exports of hogs was not comparable to the great benefits that would be derived by keeping our newsprint money at home, and affording employment to thousands of our laborers. He said that 'the raising of pine trees for paper pulp will be a regular crop in a short while.'

"President Roosevelt following a conversation with Dr. Herty last year was quoted by the press of the nation as follows: 'Dr. Herty and I first discussed the use of Georgia pine at least four or five years ago. I have been following his experiments ever since. I am delighted that his dream has come true and that we are to use Southern pines for newsprint purposes.' The President was presented with the proposal by the Chemical Foundation, in regard to the new industry in the South, but referred it to the Department of Agriculture with the accompanying results.

"'I don't know any matter more closely bound up with the welfare of the South, than the creation of commercial values for young pines that grow up so readily on every farmer's woodlot in the South. These young pines today have no commercial value. We have proved that they are wonderfully well adapted to the making of white paper. The presence of a paper mill in the South would give immediate value to these young pines,' continued Dr. Herty.

"'Marion Renfroe, a young farmer in Brooks county, during the last three years has demonstrated that a farm can be utilized for growing food crops, such as corn, planted in between rows of pines, and that pine raised from transplanted seedlings profit so much from the cultivation of the nearby corn, that they have grown practically twice as much as those grown on cutover or uncultivated land.

(Continued on page 22)

Paper Demand Moderately Active in Boston

Seasonal Influences Largely Govern Local Paper Market Conditions—Box Board Market Continues Rather Quiet—Paper Stock Situation Practically Unchanged—Provisions of Paper Distributing Code Remains In Full Force

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., June 11, 1934—Hardly more than a moderate volume of business was transacted by Boston wholesale paper dealers last week, the market being governed largely by seasonal influences. In exceptional cases, there was a good amount of activity.

The NRA announcement in regard to price fixing matters was somewhat disturbing at first, at least to some of the trade, but Frank B. Cummings, executive secretary for the Code Authority Paper Distributing Trade New England, Central and Northern New York Regional Committee, Region No. 1, has sent out a bulletin to all members of the paper distributing trade in this region, indicating that the provisions of the paper distributing Code remain in full force and call for strict compliance, notwithstanding the newspaper articles that might be interpreted to the contrary. The bulletin states:

"No changes or amendments to our Code are possible without specific order of the Administrator or President Roosevelt, and no such order has been given. The NRA memorandum refers only to changes in NRA policy regarding pending and future Codes and Code Amendments.

"Please note particularly that the long-awaited decision regarding allowance for wages of labor to be added to replacement cost, Article VIII, Section 4(a), has been handed down by the Administrator, effective immediately.

"The following percentages must be added to market replacement cost to cover labor. No sales can be made at lower than the amount thus computed.

Warehouse Sales, Fine Paper, Add 12 per cent
Indirect Sales, Fine Paper, Add 3 per cent
Direct Sales, Fine Paper Add 2 per cent
Warehouse Sales, Wrapping Paper Add 9 per cent.
Indirect Sales, Wrapping Paper Add 2 per cent
Direct Sales, Wrapping Paper Add 1 per cent

"Any prices filed at present or in the future under the Price Reporting Plan in any quantity brackets at a figure lower than market replacement cost plus the proper percentage addition as above are and will be null and void."

A bulletin is to be issued early this week showing new requirements for filing invoices on job lots and seconds.

The box board market remained dull, influenced, as in the paper market, largely by seasonal conditions, although in some quarters it was reported as "not so bad."

Conditions in the paper stock market continued practically the same, quiet prevailing. Mills bought small quantities on concessions in cases where their stocks were reduced. There was no change in the price of mixed papers, which remained at .15 @ .20, nor in old newspapers, which continued at .30 @ .35, but corrugated boxes declined to .30 @ .32½ from .30 @ .35. In bagging, foreign manila rope went down to 2.00 @ 2.12½ from 2.25, domestic manila rope to 2.25 @ 2.37½ from 2.50, but jute rope advanced to 1.50 @ 1.60 from 1.35. New and old domestic rags were unchanged, but in foreign rags, dark cottons declined to .85 @ .95 from 1.00 @ 1.10.

News of the Trade

The Open Price Schedules which were published and became operative and binding June 7 were the subject of discussion at a meeting of the Wrapping Paper Division of the New England Paper Merchants Association, held at the Boston Chamber of Commerce on June 6. President F. Bendel Tracy presided, with forty members present.

The staff of Storrs & Bement Company were guests of the company on an outing to Pemberton Saturday afternoon, with some 75 in the party. Among the features of the program were a dinner and a baseball game between the warehouse and the office. Some went by boat and others in automobiles.

Leon M. Poore, director of sales for John Carter & Co., Inc., is taking an early vacation, on which he is doing a little fishing and considerable resting.

Walker Holmes, of the Crocker-McElwain Company, Mass., has been visiting the printers of this vicinity in regard to De Vinne Smooth, a new paper the company has brought out, both for offset and letter press printing.

Paul L. Houston, vice-president of the Marvellum Company, Holyoke, called on the trade in Boston and vicinity, including Henry L. Goodman, who are New England distributors of box papers and greeting cards for this concern. The Marvellum Company expects to announce some new lines shortly.

J. C. McCormick, treasurer of Knowlton Bros., Watertown, N. Y., manufacturers of cover, mimeograph, folder, text, Cheviot box covering and pattern papers, called on the trade last week.

The Pilgrim Paper Corporation, Boston, has been incorporated with a capital stock of $50,000. There are 500 shares, $100 each. Benjamin Schwartz is president; Harry S. Horne, 157 Federal street, Boston, treasurer; and Leo Albert is the third incorporator.

Herbert Farrier, of the Japan Paper Company, was elected secretary of the Advertising Club of Boston at the annual dinner and election of officers at the Hotel Statler, June 5.

Oxford Miami Paper Co. Files Tax Suit

DAYTON, Ohio, June 11, 1934—The Oxford Miami Paper Company has just filed a suit in the Common Pleas Court here, appealing from the classification for taxation of certain of its property. The action was filed by the West Carrollton firm against the Tax Commission of Ohio and Joseph A. Lutz, county auditor of Montgomery county in which the paper mills are located.

It is set out in the petition that on December 19, 1931, the company filed a complaint with the Board of Revision in this city asking that the classification made by the county appraisal and assessment board which placed a steam system and power generating plant under rear property, be changed so that it would come under personal property, for taxation purposes.

The original complaint, the petition avers, said that the assessed valuation of the system and equipment amounting to $170,390 be taxed as personal property at 50 per cent

The request was denied by the Board here on February 4, 1932, whereupon the matter was placed before the State Tax Commission, which upheld the ruling of the county board.

Ontario Paper Mills Continue Fairly Active

While Majority of Fine Paper Mills Are Operating Lightly, Production of Coated Paper Has Improved Materially—Demand for Book, Bond, Writing and Litho Papers Falls Off Slightly—Light Weight Paper Manufacturers Doing Steady Trade

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., June 11, 1934—Business generally in Canada appears to have reached a point where improvement has been at least temporarily halted and this applies to the pulp and paper industry, although to a lesser extent than to other lines of industry. In Canada it is felt that further recovery must depend largely on the size and value of agricultural production. The fact that despite great gains in employment, large numbers of workers and salaried employees have not yet benefited through increased remuneration, is also acting as a brake to recovery, while further recovery in the construction industry must accompany any additional marked advance, it is generally considered.

As far as the paper industry is concerned, both mills and jobbers are fairly active and are getting fair amount of business in each case but conditions are admittedly spotty and the average of turnover in both fine and coarse papers has diminished somewhat during the past month. There may be some recovery before the summer season is well under way, but the consensus of opinion is that quiet conditions will obtain during the summer holiday period and that sales will be considerably lighter.

At the moment most of the fine paper mills are operating lightly, although there has been a noticeable improvement in the output of the coated paper mills. Demand for that class of paper has picked up quite markedly during the past month or so, while on the other hand the call for book, bond, litho and writings has slightly fallen off. Fine paper manufacturers say there is some nice business in sight but whether it will be released until after the summer vacation period is over they are unable to say. Some fairly nice business is going in cover stock lines and in Canadian-made blottings and tags, while the light weight paper manufacturers are doing a steady trade with perhaps somewhat lessened competition from outside sources. There is no change in paper converting lines which have been dull for some months and the call for envelopes and general stationery is light.

Improvements at Provincial Mill

Work is now in progress at the Port Arthur mill of Provincial Paper, Ltd., which is designed to facilitate manufacture and increase the quality of the mill's product. The program includes the installation of the Chemi-Pulp System in the sulphite mill and putting suction first presses on both paper machines. The work will be completed during the summer month. F. S. Duncan, president of the company, told the PAPER TRADE JOURNAL that the work would not necessitate the closing down of the plant and that the installations were being made by the company's own staff.

N. B. Pulpwood Cutting Operations

The summer cutting of pulpwood and peeling operations in central and southern New Brunswick is now under way and will give employment to many men until early September. Operations will be on a larger scale than last year, the Port Royal Pulp and Paper Company, of Saint John, being in the field for a considerable quantity of wood. It is expected that between 10,000 and 20,000 cords will be cut along the central St. John river and its tributaries. A large quantity will also be cut in Charlotte County for the Port Royal mill, purchases of which now reach 50,000 cords or more each season. Pulpwood cutters and peelers are receiving higher returns for their work now than was the case in the past two years, the increase being 50 per cent. The new wage scale has been established by the New Brunswick Forest Operations Commission, which is now effective. Pulpwood prices are also up, due to the improved demand. The price paid to operators is from $5 to $5.50 per cord, which is $1 to $1.50 higher than last year.

Pulpwood Cutters Get Increased Pay

An increase of 40 cents a cord for cutting and peeling pulpwood during the summer has been granted by district timber operators, and bush workers have promised that no strike will be called in timber and pulp camps between now and September 1, it is announced by D. A. Clark, president of the Lakehead Timbermen's Association, Port Arthur, Ont. The rate established for cutting and peeling spruce and balsam pulpwood is now $3.15 a cord for wood up to 50 inches long, and $6 for the double cord of 98 inches in length. For cutting and peeling poplar the rate is $2 a cord for wood up to 54 inches in length, with an additional 25 cents a cord for each extra four inches of length. The monthly rate for bushmen is set at $35 and for teamsters $40, each rate being for a 26-day month.

Strike Troubles Over for Year Anyway

Provincial Paper, Ltd., at Porth Arthur, will operate at least one year without interference in the form of strikes and lockouts as the result of an agreement between the company and its men, A. G. Pounsford, mill manager, said this week. The agreement drawn up following negotiations with representatives of the union employees who threatened to strike for increased wages, guarantees operation of the mill for a period of one year from June 1, granted a complete closed shop to the three unions involved, and allow adjustment in rates for a large number of individual jobs to bring them to standard wage practice.

R. H. Bursch Vice. Pres. of Robert Gair Co.

The appointment of R. H. Bursch as vice-president of Robert Gair Company, Inc., the parent concern of the Gair group, has been announced by E. Victor Donaldson, president. Effective immediately, Mr. Donaldson said, Mr. Bursch assumes complete charge of production and sales in all oprating divisions of the company in the United States including subsidiaries engaged in the manufacture of boxboards, folding cartons and shipping containers.

Mr. Bursch has held executive posts both in sales and production for the Gair Company for a period of years. Most recently he has been executive vice-president and general manager of the container divisions, in which posts he will now be succeeded by Lorin B. Miller.

Mr. Donaldson also announced the appointment of A. B. Manogue as general board mill superintendent, under Mr. Bursch. Mr. Manogue, for a period of years, has been manager of the company's Haverhill, Mass., mill.

Demand for Paper Slightly Lower in Chicago

Fine Paper Market Generally Continues Steady to Firm, Despite Restricted Request for Several Standard Grades—Influenced by Continued Improvement In Newsprint Paper Situation, Ground Wood Papers Exhibit Stronger Undertone

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., June 9, 1934—In contrast to 1933 when the paper industry began to sharply shake off its long period of doldrums during the latter part of May and continued to enjoy a buying wave during the early summer months, the Chicago paper market is now quietly consolidating its gains and, according to reports, going into a summer of somewhat slackening demand characteristic of past years. A part of the comparative lull of the past week or so has been due to a general halting of business in view of uncertainties in the legislative picture.

Markets Have An Encouraging Tone

Local markets are reported firm, however, and there seems to be an encouraging tone, despite the comparative lessening of demand. Groundwoods took on a firmer tone during the week as reports continued relative to the betterment of the newsprint situation. Fine papers were firm, adjustments having been completed in the two sulphite grades without any other rearrangement, according to reports. The kraft market was about the same as last week, some improvement over that period being noted, however, in certain specialties. Board was in fair demand —both the board and general paper markets, however, looking forward to final disposal and standardization of the code situation through pending revised codes now before NRA authorities. The waste market was reported as little changed over the past week.

Paper Board Code Discussed

Important code meetings were held this week in both New York and Chicago under the auspices of the Paperboard Code Authority, the eastern meeting at the Commodore Hotel, New York City, and the western meeting at the Blackstone Hotel. Both were held on Thursday, June 7. The preliminary discussions were held to provide members of the industry with the opportunity of closely examining the proposed revised code of fair competition for the paper board manufacturing industry which was submitted at that time. The tweny pages of revised code have already been mailed to the National Recovery Administration with request for a formal hearing, according to Sidney Frohman, chairman of the Paperboard Code Authority. After the date has been set for the hearing before the NRA, a general meeting of the paper board industry will be scheduled to be held in Washington, D. C., on or about June 20 in advance of the NRA hearing in order that all members of the industry and others interested may have the opportunity to further consider the final form in which the Code shall be formally presented at the hearing.

Mr. Frohman states that the twenty-page draft presented follows in form the proposed revised code for the paper and pulp industry and that the labor provisions are identically the same. He says, however, that several provisions in the two codes differ and that several items remain on which further conference may be necessary with representatives of the NRA and of the paper and pulp industry. Mr. Frohman refers, specifically, to Article I headed "Definitions." The revised code includes full information as to Definitions; Organization; Administration; Hours of Labor, Wages; General Labor Provisions; Accounting, Selling and Trade Practice Rules; Reports and Statistics; Registration, Installation and Use of Machinery; Voluntary Agreements and General Provisions—eleven articles in all.

Under the revised code the industry is divided into the following divisions—Eastern Container Board; Western Container Board; Southern Container Board; Eastern Box Board; Western Box Board; Corrugating Materials; Pacific Coast; Lightweight Chip Board and Other Board Products. The minimum rate of wage of any worker is described as follows: Northern Zone, all of the United States except the territory described in the Central and Southern Zones, Male: 42 cents an hour; Female, 37 cents an hour. Central Zone, Delaware, Maryland, Virginia, West Virginia, Kentucky, Tennessee and North Carolina and the District of Columbia, Male: 39 cents an hour and Female 34 cents an hour. Southern Zone, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas and Texas, Male, 34 cents an hour and Female, 30 cents an hour. The minimum rate of wages for all employees, in the Northern Zone is $16.00 per week; in the Central Zone, $15.00 and in the Southern Zone $14.00 per week. With the provision, however, that in any city with a population in excess of 250,000, the minimum wage shall not be less than $1.00 per week in excess of the minimum for the Zone in which such city is located.

Under the heading of General Labor Provisions no person under sixteen years of age shall be employed in the industry. No person under eighteen shall be employed, except in clerical, office or laboratory work.

Industry members of the Code Authority are Sidney Frohman, W. J. Alford, Jr., E. Victor Donaldson, E. T. Gardner, Alan G. Goldsmith, J. W. Kieckhifer, J. Gibson McIlvain, G. G. Otto, Walter P. Paepcke, H. L. Rauch and W. B. Turner. H. S. Adler is the secretary, while W. W. Pickard is the NRA member of the committee.

News of the Trade

The Middle West Division of the Salesmen's Association of the Paper Industry will hold the second of its series of enjoyable golf outings on Friday, June 15, the famous Chicago Golf Club, oldest in the district, serving as host on the occasion. R. R. Cook, chairman of the golf committee for the association, expects over sixty members and guests for the luncheon, golf, and dinner in the evening. A long list of trophies and prizes, including the "Mystery Cup" are ready for award to various prize winners.

The Swigart Paper Company, 723 South Wells street, Chicago, is doing a good job of merchandising a new blue white "Linweave Chateau" suitable for weddings, commercials, with flat paper and board also carried in stock. The announcement listing the qualifications of "Chateau" is carried on Hoover—Blue White Linweave Chateau.

H. R. Knott, sales executive of the Eastern Manufacturing Company in this territory, will return on June 14 from an extensive three weeks business trip which took him through the Southwest, the Pacific Coast and the Northwest Coast territory.

Activities of Fox River Valley Paper Mills

Large Water Shipments of Pulpwood and Imported Pulp Under Way Destined for Wisconsin Paper Plants—Cargo of One Thousand Tons of Pulp Arrives at Ashland for Marathon—Marinette May Become Free Port Zone Under New Law

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., June 11, 1934—Extensive movement of pulpwood and foreign pulp via water is under way destined to Wisconsin mills. Superior Spruce, Inc., the new pulpwood company operating at Ashland, Wis., is getting under way and will have its car loading hoist ready about July 1.

This company will operate jointly with Newaygo Tug Line, Inc., Ashland, a subsidiary of the Consolidated Water Power and Paper Company, in rafting wood across Lake Superior from Port Arthur, Canada, and other near by points. The first shipment will arrive at Ashland about June 25, with approximately 8,000 cords. This raft will be split between the two companies for delivery, but all loading will be handled by the Newaygo hoist until the spruce company has its own equipment ready, according to F. I. Towl, vice-president of Superior Spruce, Incorporated.

The Newaygo tug *Butterfield* has been over hauled and placed in condition for a big shipping season, and will carry a crew of fifteen men. Six rafts will be floated across the lake this season. Fifty-four men will be employed on the loading hoist as soon as the first raft arrives, and will work in two shifts placing the logs on cars for rail delivery. A pile driver has been employed in the Ashland harbor in preparation for the landing of the rafts.

One European shipment of pulp has arrived at Ashland for the Marathon Paper Mills Company mill there. It was a cargo of 1,000 tons aboard the Canadian freighter *Magog*. The steamer *Hauk* is expected from Norway within a week with another cargo. Several additional shipments will arrive during the summer and the estimated total of deliveries is 6,800 tons.

Production will be stepped up at the Marathon mills to manufacture the foreign pulp and eighty extra employees will be added.

Marinette, Wis., another import center for pulp, probably will be made a free port as the result of a bill which has passed the house and senate at Washington and is in conference for an agreement on amendments. Under the terms of the bill, a special board consisting of the secretaries of commerce, treasury and war is empowered permission for setting up free ports in or adjacent to Marinette. Such zones may be operated by either public or private corporations. A free port is designed as a neutral zone exempt from customs law as affecting goods destined for re-export. No duties are collectible unless and until imported goods enter the domestic market. Goods may be landed and manufactured for export without intervention of customs officials.

New Wet End for Board Machine

The Alton Boxboard and Paper Company, of Alton, Ill., managed by G. G. Otto, a former paper mill executive of Appleton, Wis., has let contracts for a new wet end for its board machine. The alteration will increase production and permit of a greater variety of board products. The machine will be down about a week, since much of the preliminary work will be done while it is in operation. This machine was installed 25 years ago when the mill was started.

Later in the summer, contracts will be awarded for the erection of a new warehouse 70 by 400 feet in size. It will provide increased storage space.

News of the Industry

Safety executives of several paper mills were called into conference last week at Stevens Point, Wis., at the request of Governor A. G. Schmedeman, to draft a campaign for street and highway safety. A permanent organization was set up, with George R. Howitt, of Milwaukee, Wis., as chairman. J. J. Plzak, safety director of the Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis., was chosen on the executive committee to represent the seventh congressional district. Franz Rosebush, of the Nekoosa-Edwards Paper Company, Port Edwards, Wis., assisted in setting up the organization.

Products manufactured by the George A. Whiting Paper Company, Menasha, Wis., have been placed on display in the lobby of the First National Bank of Menasha. The bank is promoting acquaintance of the public with products locally manufactured. A portrait of the late George A. Whiting, who founded the concern in 1882, is included with the display.

F. J. Sensenbrenner, president of the Kimberly-Clark Corporation, was one of the speakers at the fourteenth quadrennial meeting of the supreme assembly of the Equitable Reserve Association at Neenah, Wis., last week. He was one of the advisers of this fraternal insurance organization when it was started in 1897 and in his address complimented the officers on its success and stability.

Indianapolis Demand Moderate

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., June 11, 1934—Only a moderate paper business was reported in many of the grades during last week. The entire industry is entering the regular summer dull season, however, in a much better shape than it did a year ago. Demand thus far this year is outstandingly ahead of the same period last year, so there is little complaining. Hot weather during most of the last week caused a big rush for summer specialties, which promises to continue unabated for some time. The demand on local jobbers was particularly heavy because earlier in the season, due to a late spring, the retailers had not bought heavily and their stocks were light. The last two weeks, however, have seen heavier orders purchased in almost all these items and with larger stocks in retail hands, the jobbers are expecting a lighter volume until they are more nearly exhausted.

The news print demand continues heavy and thus far has not been disturbed by the hot weather. In fact the continued increasing advertising lineage in the entire state is one of the most encouraging features in the market.

Demand for bags and wrapping paper holds good. In fact the entire kraft field is in good shape.

Paper box and container factories appear busy. Reports show their production about on the same level it has been for some time and their order files are in much better shape than they were this time last year. Demand for cellophane and transparent papers also is good.

Paper Distributors Code Still In Full Force

Philadelphia Paper Merchants Reassured by Telegram From Distributors' Code Authority That New NRA Policy Refers Only to Pending and Future Codes and Amendments—Two Constructive Developments Approved by Code Administrator

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., June 11, 1934 — The regular monthly meeting of the Fine Division of the Paper Trade Association of Philadelphia, held Friday afternoon, June 8, in the Association's headquarters, Drexel Building, occurred at an opportune time, because it gave the Philadelphia trade a chance to exchange ideas on the situation created by the bomb shell from the N.R.A., published in the newspapers of that date to the effect that all price provisions in the N.R.A. codes were to be abolished.

A full attendance was on hand, and when Chairman Norbert A. Considine opened the meeting there was an atmosphere of great indignation over the possibility that the months of strenuous activity on the part of the leaders in local trade circles, as well as on the part of national bodies, to bring some order and stability out of the chaotic and ruinous conditions that existed a year ago, should prove futile in this climax of the program.

All other scheduled business was set aside for the discussion of this new emergency. It quickly became clear that the members of the local trade, proud of the fact that they constituted the first Administrative area in the United States of America, in which the Price Reporting Plan had become effective on a long list of grades of paper, were opposed to any abolition of the plan.

It was mentioned by Leon Beck, of Chas. Beck Company; W. S. Wilcox, of Wilcox-Walter-Furlong Paper Company, and Harry F. Donahue, of Molten Paper Company, and other members who took the floor that the customers of the Fine Division were heartily in favor of Open Prices, and a stabilized market—that they preferred the present status to the old days of uncertainty.

The status of present complaints—and there are several that have been passed on by the local administration—was also discussed. It was the firm belief of all those present that it would be unjust to those members of the trade who have whole-heartedly and sincerely co-operated in the operation of the Code, to permit those who have violated the Code and defied its provisions to not only escape the penalty for their acts but to be able to make capital with the chiseling type of buyer over their ability to break price schedules agreed upon by the trade as necessary for the sound conduct of the business.

Other speakers pointed out the increases in wage rates, pay rolls, and reduction in the hours of labor for warehouse delivery and office employees, and raised the question as to whether present status could be continued if the price stabilizing provisions were abandoned.

The paper salesmen, of whom there are over four hundred in this area, found several champions to defend their rights to a reasonable compensation, in keeping with their education, experience and social status. Present compensation rates for salesmen, it was declared, could not be maintained, if present schedules were destroyed.

In concluding the meeting, resolutions were unanimously adopted, copies of which were to be sent to the headquarters of the National Paper Trade Association, declaring the continued support of the Philadelphia Division to the Price Reporting Plan, and pledging the membershio to stand by the Paper Distributors Code, as now written, until such time as they were officially notified by the Code Authority of compulsory changes.

The trade was much cheered the following morning by receipt of the following telegram from the Paper Distributors Code Authority, New York:

"Newspaper reports and office memorandum NRA do not affect provisions Paper Distributing Code which remain in full force and require strict compliance as before. No change or amendment in code possible without specific order of Administrator or President and no such order granted. NRA memorandum refers only to change in NRA policy regarding pending and future codes and code amendments. We are able to report following two constructive developments today approved by Administrator. Allowance for wages of labor to be added to replacement cost effective immediately. Percentage of replacement cost to be added—fine paper lines twelve per cent, warehouse sales three per cent indirect, two per cent direct. Wrapping paper lines nine per cent, warehouse two per cent indirect, one per cent direct. Mandatory requirements for filing of invoices on job lots and seconds to cover transactions in discretion of regional committees. Bulletins going forward tomorrow. You are instructed to take immediate steps to notify trade of the above."

Container Plant Improvements

Construction work which is being installed at the Philadelphia plant of the Container Corporation of America is as follows: New boiler and power unit consisting of 500 lbs. pressure boiler and 6250 k.v.a. turbo-generator. This equipment will replace existing equipment for greater efficiency and reduced cost, and it is estimated will cost about $450,000. Also an additional warehouse about 203½ feet long by 83 feet wide for storage of about 5000 tons of waste paper, at an estimated cost of about $35,000. New warehouse for storage of about 10,000 tons of roll stock for fiber and corrugated plants, at estimated cost of about $100,000. New beater room equipment including two new breakers complete with settling systems, thickeners, screens, etc., to replace the existing beater room for 152 inch board machine, the cost of which is estimated at about $75,000.

Code Authority for Envelope Industry Approved

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., June 13, 1934—The National Recovery Administration has announced through the office of Division Administrator George L. Berry, its approval of the personnel of the Code Authority for the envelope industry, as follows: E. V. Johnson, U. S. Envelope Company, Springfield, Mass.; M. P. Altschul, Cleveland, Ohio; W. S. Bacon, American Paper Goods Company, Kensington, Conn.; Walter J. Berkowitz, Kansas City, Mo.; George W. Hall, Los Angeles; F. W. Randolph, Chicago; L. G. Reineman, Buffalo; F. P. Schneider, Chicago; Carlton W. Smith, American Envelope Company, West Carrollton, Ohio; Harold Smith, Kansas City, Mo.; and James S. Wiley, New York City.

The Value of Proper Weight Adjustment in the Operation of a Paper Machine Press*

By C. D. DeMers[1]

The story of a wood pulp fiber or cluster of fibers on its travel from the wood pile in the mill yard or storage pond, while playing an intimate part in the production of a literary best seller, is in itself not necessarily even a good seller unless great care has been taken in controlling and operating the many production units through which the stock passes on its journey along the stock flow line from the wood pile to the finishing room.

The modern pulp and paper mill is one of the most highly organized of any industrial organization. The manufacture of pulp, both chemical and mechanical, and its conversion into paper is a very complex process, and the paper machine one of the largest, most complicated and expensive production units in the industrial world.

Immense sums of money for engineering research and construction, modern and efficient equipment, and a high caliber operating personnel are a part of the huge task necessary to assemble a modern pulp and paper mill; all to the end that a uniform product can be made at a conversion cost that would justify the plant's investment.

But with all due credit to the engineering research and design, careful construction, modern equipment and efficient supervision, built into the plant and operating units from wood pile to finishing room, it is our contention that one of the most important processes—a critical one in the stock flow line—has not been given the consideration that its relation to both quality and conversion cost would justify.

Importance of Press Section

We refer to the press section of the machine. The stock may be properly ground or cooked and screened in the pulp mill, properly beaten, Jordaned, screened and formed on the wire or cylinder, but in passing through the press section of the machine, either one, two, three or four presses, unless the rolls are properly crowned, the felt properly stretched and cleaned, and the weight adjusted so that uniform pressure is exerted across the entire width of the press roll, it will be difficult to produce a uniformly dried sheet with the definite characteristics desired in the finish, bulk, density, opacity, or any of the many qualities so essential to any definite specifications.

In the average paper mill the usual amount of care is taken to check the crowns of the rolls on the several presses, felts are washed and turned by hand at least once a day or periodically cleaned several times a day with any of the several automatic felt cleaners, the weights are adjusted on the bottom fulcrum levers by the machine tender according to his idea of where the weight or weights should be located, and, as a rule, fairly uniform and satisfactory results are obtained, because the machine operator has had a fairly close check on roll crowns, felt condition, sheet formation, high pressure showers, etc., but he has absolutely no check on one of the major variables, the actual weight being exerted on each end of the press roll regardless of just where he places the weight on the lower fulcrum arm.

The design and construction of the weight and lever arrangement on the press section of even the comparatively new paper machine is relatively crude from a standpoint of design and workmanship, and offers possibilities of great variations in the pressure exerted on the two ends of the press because of the terrific friction built up at the several points of contact between the tension rods, fulcrum arms and fulcrum points. This is shown by even a casual check of the method followed in anchoring the short fulcrum arm to the press frame and the crude and unfinished contact between the tension rod supporting the short fulcrum arm and the extension piece from the top roll bearing.

In a paper read by Dr. E. A. Rees, director of the Research Department of the F. C. Huyck & Sons Company, manufacturers of the Famous Kenwood Felt, at a meeting of the TAPPI Association in 1925, the following statement is made: "Every practical running condition operates with the sides of pressroll unevenly weighted to a more or less degree. Even with the weights placed at the same notches on the lever arm, we have found differences as great as a ton on the two sides of the pressroll. Binding at the contact points of the fulcrum always occurs, and the effect is exaggerated many times by compounding, etc., etc."

This statement, based on the results of careful and extensive tests made on several presses of an average machine to determine the relations between uneven roll pressures and felt cost, is very significant and definitely states that wide variations in roll pressures do exist when the weights are adjusted without the use of some measuring device.

Aids to Uniformity

After a general study of the pulp and paper industry by engineers of the Taylor Instrument Companies to determine the practicability and the value of control and record of some of the major processes as an aid to the mill executives and operators in their ceaseless effort to produce a uniform product, it was felt that control of the two fundamental processes were the more critical ones, and the Taylor pulp grinder temperature control and the Taylor automatic sulphite digester control were developed as an aid to uniformity in the production of both mechanical and chemical wood pulp.

The next step was a study of the operating features of the several sections of a paper machine and an outstanding example of a constant operating variable was found in the pressures carried on the couch and press section of the machine where the weights were adjusted from the standpoint of ratio as expressed in a definite position on the lower fulcrum arm with no definite knowledge of the actual pressures being exerted on the sheet, felt or rolls by the weights as adjusted.

Our belief that a record of this important variable would be of interest and value to the industry as an aid to the papermaker in the control of this critical process led to the development of an instrument for recording the actual pressure exerted on the top pressroll bearing of each end of the press by the weight and lever arrangement.

The present instrument, the result of several years of

* Presented at the spring meeting of the Northern New York Division of the American Pulp and Paper Mill Superintendents Association, Cornwall, Ont., May 18, 1934.

[1] Pulp and Paper Division Industrial Sales Dept., Taylor Instrument Companies, Rochester, N. Y.

study and experimentation, has proven its efficiency and ability to withstand the operating stress in the average paper mill for a period of over two years, as the first instrument was made and installed in April of 1932.

The First Recorder

The first recorder, installed as per drawing No. 6529, is a bi-record of two-pen type. The load element, as shown, is made a part of the tension rod between the top roll bearing and the short fulcrum arm; this on both ends of the press. As the weights are adjusted the pens record the pressure exerted on each end of the roll, enabling the machine tender to adjust the weights so that even pressures are carried when such are required or to adjust them so that just the proper weights are carried on both ends to suit the operating conditions of the machine.

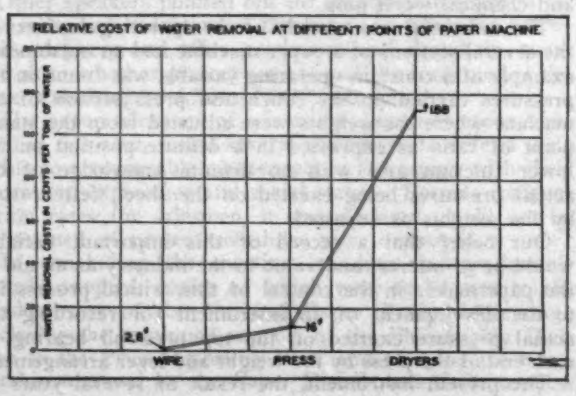
In adjusting the weights so that uniform pressures are carried on both ends of the roll, it is only necessary to set the weight on one side to a point found suitable to any operating condition and basic weight, and then adjust the other weight so that the second recorder pen is recording the same weight as that of the first adjustment.

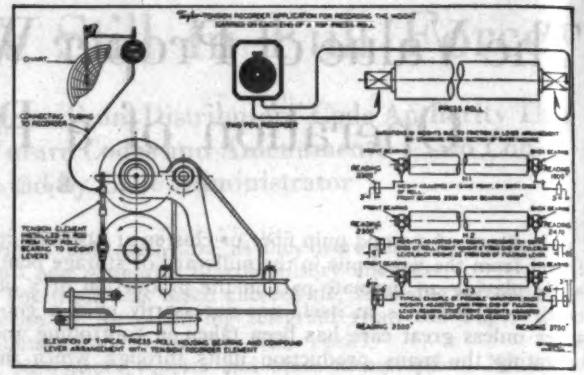
Three Detailed Examples of Pressure

One of the first instruments, sensitive to approximately six pounds, developed the facts on which the three detailed examples of pressures and weight variations shown on Drawing No. 6529 were based, and on starting up after the installation was finished the machine tender was told to disregard the instrument entirely and to adjust the weights in the usual manner, which in the case of that particular sheet being made at that time was a 50-pound weight six inches from the end of the lower fulcrum lever on both end of the press. On checking the record we found that one pen was recording 1900 pounds and the other pen recording 2500 pounds, a differential of 600 pounds, although the weights were adjusted in the usual manner and to the best judgment of that particular operator.

As it was desired to carry approximately 2500 pounds on each end of the pressrolls at that time, the weight on one end, the end that had been recording 1900 lbs., was moved out to a point where the record showed 2470 lbs., at which time the weight was 2¼" from the end of the lower fulcrum arm as compared with the 6" from the end of the opposite fulcrum arm.

On another occasion it was desired to carry 3500 pounds, on the pressroll, and a 50-pound weight was moved ¾ inch past the end of the lower fulcrum arm on the front bearing, and another 50-pound weight ⅝ inch from that on the same fulcrum arm, and recorded 3550 pounds. On the back bearing the first weight was located 3 inches from the end of the lower fulcrum arm, and another 50-pound weight was located 6¼ inches from that as shown





on Drawing No. 6529 and recorded 3750 pounds. This is a very definite example of what friction means in the weight and lever arrangement of the average paper machine. On the front bearing with the weights located at the extreme end of the lower fulcrum arm, there was actually 200 pounds less than that on the back bearing with the weights nearer the center of the fulcrum lever, when as a matter of fact there should have been 1100 pounds more if no friction had existed.

Typical of What May Be Expected

These three examples of the wide variations possible in pressroll pressures under the present method of weight adjustment are not peculiar to the particular machine on which the test was made but are typical of what may be expected on any machine now in operation and the same chances or possibilities of variations will exist just as long as machinery manufacturers continue to follow the present and past trend of lever design in the building of this most important part of a paper machine.

What do these variations mean in the operation of a paper machine press? In considering this question it is necessary that we study the conversion figures for two of the major items embodied in a paper mill cost sheet. First the felt cost per ton, and, second, the steam cost per ton for drying the paper. In connection with the first item it is well to consider the fact that in Kenwood Bulletin No. 34 on the life of felt—uneven frictional wear—the statement is made: "There are many instances, however, where felt life can be improved without the necessity of careful adjustment in felt design. In many cases an application of simple common sense will greatly increase the life of felt because other things being equal the life is directly proportional to the frictional wear that is placed upon it. And further to obtain the maximum life that is built into the felt the mechanical wearing effect should be uniformly distributed across the felt. And still further the frictional wear that is exerted on any felt in practical operation should be exerted in a uniform manner to realize the maximum benefit in life and felt economy. Felt costs can be materially reduced by a more careful and systematic application of this simple principle in felt usage."

As practical and technical operators of paper machines and paper machine presses, you are fully aware of the fact that the greatest factor—frictional wear of a felt—is invariably due to the possibilities of uneven pressures on the felt roll which causes one side of the felt to be operating at from 100 to 1000 pounds more or less pressure than that of the other edge. Regardless of what your felt cost is per ton, it would seem that careful consideration might be given to the possibilities of eliminating this vital factor of uneven frictional wear with its resultant higher felt cost per ton. The reduction in your felt cost of but 5 to

10 per cent while in itself would not be a large figure would undoubtedly amount to a considerable sum if based on yearly tonnage and felt cost.

Steam Cost Per Ton

In connection with the second item—steam cost per ton—it might be well to consider drawing No. 6530, showing the relative cost of removing water at different points of a paper machine and the fact that in Kenwood Bulletin No. 31 on how "felt removes water" the following statement is made: "In the operation of a paper machine it so happens that the cost of removing water increases tremendously as the sheet passes from one succeeding method to the other. By far the largest amount and at the cheapest cost is removed at the wire. The pressing method in turn removes water much more cheaply than the driers.

"An average cost of removing water at the wires of a modern high-speed news machine is 2.6 cents per ton of water. The cost of removing it at the presses averages about 15 cents per ton, while the cost of removing water at the dryers will average close to $1.68 per ton of water removed." This ratio of ten to one between the cost of pressing water from the sheet at the press section and evaporating it at the driers shows the tremendous possibility for economy in consideration of the fact that a reduction of one per cent in water content of the sheet leaving the press to go through the drier section shows a reduction of approximately five per cent in the cost of drying.

Further, just as long as a press is operated without the maximum permissible weight, by which we mean the maximum weight that can be exerted on the pressroll without damage to sheet, pulp or roll, then just so long will that particular machine be handicapped in an effort to produce a product at the minimum conversion cost and the plant as a whole be penalized by an extreme and unnecessarily high drying cost.

A More Common Source of Trouble

That is one side—the economic picture. An old and a more common source of trouble, due to uneven weight adjustment, results in an over or underdried edge and a cockled or grainy sheet. If, as shown on the drawing, a machine tender adjusts the weights uniformly in the belief that uniform pressures will result, when in reality there may be a difference from 5 to 1000 pounds in the pressures exerted on the two ends of the pressroll, it is reasonable to expect that the paper will be improperly dried when it leaves the machine—that is, the overpressed edge will be overdried, or the underpressed edge will be underdried.

I have asked papermakers these questions and have been told that when the paper is found to be running wet on one edge and overdried on the other the weights are adjusted to take care of this condition and that it is the duty of the machine tender to check the drying and to adjust the weights accordingly, but the fact remains that on one or the first installation of this recorder we asked the operator to adjust the weights in the usual way for an average running condition and he did adjust the two weights on the same relative points on the lower fulcrum arm and the machine run that way until the back tender reported that the sheet was running wet on one edge, where upon checking the recorder we found a pressure of 1900 pounds on what was the wet edge, and 2500 pounds on the overdried edge.

Too Much to Expect from the Papermaker

Through the use of a technique developed in years of practice the average papermaker can do a real job and as a general rule produces a very good sheet. But it is rather too much to expect that with the great many other duties a part of his daily work he can give the close attention necessary to the drying conditions on the drier and to constantly be readjusting the weights without the use of some indicator or recorder that will show the results of these many adjustments.

On some machines it is the usual practice to have to carry more or less weight on one particular end of the press section. This may be caused by a faulty slice adjusting arrangement, or some peculiar condition of stock flow in the head box or cylinder vat, perhaps by a feature of the drying condition in the drier, or by any of the many other possible sources of variations in sheet formation; and knowing what un-uniform weights have to be carried, a record of the weights carried is even more essential as a means of checking this critical phase of press operation.

If the machine has no unusual characteristic and both the wet and dry ends are normal, in the usual sense of the word, then a record of pressroll pressures showing that uneven weights had to be carried in order to properly dry the paper, the plant executive would know that at some point on the wet end of the machine something was out of adjustment. Perhaps the high pressure showers used for cleaning the wires were partly plugged.

Perhaps the weights on the couch roll were not properly adjusted, perhaps the suction on the suction boxes was low, perhaps the felts were dirty and filled with clay, alum size or some of the other constituents which make up part of the many different grades, or something may have happened to the pressroll head and the roll was not responding to the pressure exerted on the top roll bearing; but whatever the trouble was the fact that uneven weights had to be carried to properly dry the paper would be an indication that something was wrong and steps could be taken to correct the trouble or arranged to do so at the first opportunity.

A Real Need Demonstrated

We believe that we have shown a real need for an instrument that will enable you superintendents to find an economical balance between your felt and drying costs per ton by using this instrument to determine the proper weights for each definite grade and operating condition and then to use the chart daily to check the weights as carried during the entire 24 hours of operation.

If steam flow meters are used for recording the steam flow to each machine, you will undoubtedly note that as the weights on the major presses are carried consistently below a definite point that the steam consumption will have a tendency to rise, and that as the press weights are carried to your predetermined maximum the steam consumption will drop relatively.

If the record of steam flow was high and that of press weights showed that the maximum pressure for that particular grade was being carried, it would be obvious that there was something radically wrong in that the felts were not removing water at their normal capacity, or possibly the condensate system from or the steam supply to the dryers was at fault.

Developing Highest Press Efficiency

A record of pressroll weights offers almost unlimited possibilities for checking the efficiency of the entire process from formation to drying. Why not use this record to develop the highest possible press efficiency by simply determining the pressures to be carried each day during the life of the press felt, keeping in mind the well known fact that the water removal capacity of a press felt is reduced materially each day that it is kept in service. This

has been proven by exhaustive tests and is definitely described in Kenwood Bulletin No. 30 on "steam as related to felt life" which states in part as follows: "In the case of the second press felts, it was found that they operated at their best efficiency, 33%, on the second day, and then decreased to 21½% efficiency on the 18th day of life. This loss of 11½% in efficiency meant that the second press felts removed 46 pounds of water per minute less on the eighteenth day of the life than on the second day.

"And further that it was necessary then to evaporate by means of steam 24 pounds of water per minute more on the 18th day than on the second day of second press felt life. This figures to 46,368 pounds of additional steam on the 18th day, which, at even 40 cents per thousand pounds of steam, means that the steam cost was $18.55 higher on the 18th day than on the second day. The increase in steam consumption is being regarded as a proportionate one throughout the life of the felt."

Under the conditions so graphically described, is it reasonable to believe that the same weights should be carried during the entire life of the felt, or is it not more logical to consider a gradual increase in the pressroll pressures as the press felt loses its efficiency, starting with just the proper weight when the felt is removing water at its greater efficiency and finishing with a higher weight or pressure to offset to some extent the lower efficiency of the press felt.

A Useful Instrument for an Important Purpose

We have endeavored to show that one of the most important points in the entire process of forming and drying a sheet of paper—one of the last phases in this most complex processing of producing a marketable product from the raw wood, this at the cost of a tremendous initial investment and conversion cost—is still carried on without reliable or accurate means of checking it and that a reliable and valuable record can be made of the operating efficiency of this vital point in the process through the use of a properly designed instrument especially developed for this purpose.

Any process that has a definite relation to a subsequent process at a ratio of ten to one in the conversion cost is certainly of major importance in the consideration of conversion cost in any plant, be it large or small.

Acknowledgement is made of the courtesy shown and the data furnished by the F. C. Huyck & Sons Company.

Pulpwood Operations Active

[FROM OUR REGULAR CORRESPONDENT]

POTSDAM, N. Y., June 11, 1934—Several thousand cords of pulpwood were received this week at the Racquette River Paper Company from the Adirondacks which recently contracted to receive its supply from that source. About 4,000 cords were trucked in the vicinity of Conifer by the Johnson Pulp Company and about 2,000 cords were brought down by the Sisson-White Company which has carried on extensive lumbering operations for some time. The supply is expected to meet the needs of the company for some time.

Operations at the pulp terminal owned by the St. Regis Paper Company in the village of Waddington were started this week when a vessel docked carrying several thousand tons of pulpwood for mills in this section. Announcement was made that in all probability about 75,000 cords would be routed through the local terminal this season. The opening of the terminal has already provided work for a large number of men.

Obituary

Edward C. Wilson

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., June 11, 1934—Edward Chase Wilson, a retired business man, of Springfield, formerly with the American Writing Paper Company, died last Monday at the residence of his sister-in-law, Mrs. Seth Nichols, 1470 Beacon street, Brookline, Mass. He had been ill for a considerable period, having been stricken while in the South last winter.

Mr. Wilson was born in Boston, and for some time resided in Springfield, Mass., where he was identified with the American Writing Paper Company. Subsequently he retired and for a number of years had devoted his time to travel, maintaining a summer residence at Bass Rocks, Gloucester, Mass., where he was president of the Bass Rocks Golf Club.

Alexander D. Nadeau

MOBILE, Ala., June 9, 1934—Alexander D. Nadeau, native of Michigan and for the past three years a resident of Chickasaw, died suddenly at his home in Chickasaw recently. Mr. Nadeau had been superintendent of the Southern Kraft Company's paper mill for the past three years and prior to that time was connected with the Southern Kraft's mill at Moss Point, Miss.

Deceased is survived by his widow, Mrs. Eulalie Nadeau; one son, A. H. Nadeau; four daughters, Ann, Marie, Alice and Rita Nadeau; father and mother, Mr. and Mrs. A. D. Nadeau, of Munsing, Mich.; one brother, Joseph Nadeau, of Dalhousie, N. B., Canada; three sisters, Miss Lynn and Miss Julia Nadeau, of Munsing, Mich., and Mrs. Joseph Liberte, of Detroit, Mich., and other relatives.

Horace N. Richmond

SEATTLE, Wash., June 8—Horace Nelson, Richmond, aged seventy-three, founder of the H. N. Richmond Paper Company, and a resident of Seattle for forty years, died last week at his home, 2836 Eleventh avenue, North.

Born in Portage, Wis., Mr. Richmond came to this state in 1889. He first went into business in Tacoma, but moved to Seattle in 1894. For many years the family home was at Laurelhurst Point.

Mr. Richmond is survived by his widow, Mrs. Marian D. Richmond; a daughter, Mrs. Thomas B. Greening, and a grandson, Horace Richmond Greening.

DR. HERTY ANSWERS PROF. EZEKIAL

(Continued from page 13)

In view of the fact that several years ago there were estimated to be five million acres of farm land in Georgia untenanted, and now within the last two years many other millions of acres have been thrown out of cultivation because of the government's cotton curtailment program. There is seen here a wonderful opportunity for a new day in agriculture in Georgia, through the raising of food supplies and the furnishing of pulp wood to the paper mills.

" 'It will be a new day in another respect. Our farmers are accustomed to raising crops which are harvested annually, but a paper mill will need pine in the same quantities every day in the year and these paper mills will pay cash for such deliveries. This will bring immediate prosperity to people on the farms and to those in the woods and the money turned loose will naturally be spent in stores and shops located in cities nearby to paper mills. That means the stimulation of all lines of business in the cities.' "

Final Program for Superintendents Convention

The following is the complete program for the fifteenth annual convention of the American Pulp and Paper Mill Superintendents Association, to be held at the Poland Spring House, South Poland, Me., June 20, 21 and 22:

TUESDAY, JUNE 19

ALL DAY RECEPTION AND GET-TOGETHER FOR EARLY ARRIVALS

8.30 P.M. MUSIC HALL, POLAND SPRING HOUSE
Moving Pictures and Talk on "Fishing and Hunting in Maine," *State Warden*, JOSEPH STICKNEY

WEDNESDAY, JUNE 20

SPORTS

9.30 A.M. 9-HOLE PRACTICE GOLF ROUND
Fishing—Tennis—Baseball—Barnyard Golf

12.15 P.M. LUNCHEON, POLAND SPRING HOUSE
Toastmaster, W. E. PARSONS, Keyes Fibre Company, Waterville, Maine
Speaker, NEAL O'HARA, Newspaper Columnist and Humorist

2.00 P.M. GOLF TOURNAMENT

5.30 P.M. BARNYARD GOLF FINALS

7.30 P.M. SPORT JAMBOREE DINNER, POLAND SPRING HOUSE
Toastmaster, CLYDE W. STEWART, Parker-Young Company, Lincoln, N. H.
Master of Ceremonies, LARRY GREY, "The Dizzy Wizard"
INDOOR SPORTS
PRESENTATION OF SPORTS PRIZES

THURSDAY, JUNE 21

9.30 A.M. MUSIC HALL, POLAND SPRING HOUSE
CONVENTION CALLED TO ORDER
Invocation, REV. HARRY E. TOWNSEND, D.D.
In Memoriam, REV. HARRY E. TOWNSEND, D.D.
Address of Welcome
Response, CHARLES CHAMPION
President's Message, HERBERT T. RANDALL
Appointment of Committees

10.00 A.M. GENERAL CONFERENCE
HERBERT T. RANDALL, *President*, presiding
Newsprint from Southern Pine, DR. CHARLES H. HERTY, Director, Pulp and Paper Laboratory, Savannah, Ga.
Government Printing Office Paper Tests and Their Significance, MORRIS S. KANTROWITZ, Technical Director, U. S. Government Printing Office, Washington, D. C.
Improvement in Paper Machinery During 1933-34, G. A. PETERSON, Sales Dept., Rice, Barton & Fales, Inc.

12.30 P.M. LUNCHEON, POLAND SPRING HOUSE
Toastmaster,
Speaker, REV. JOHN NICOL MARK, "Scotch Wit and a Little Philosophy"

2.30 P.M. GROUP MEETINGS

5.30 P.M. EMERSON-MASON DANCERS ON LAWN
"Seaweed"
"Indian Fantasy"

7.00 P.M. DINNER, POLAND SPRING HOUSE
Toastmaster, NELSON R. DAVIS
Speaker, WHITING WILLIAMS, "Manager and Man Under the New Deal"

10.00 P.M. COSTUME BALL
Music by Lloyd Rafnell and his Georgians
Specialty Dancing

GROUP MEETINGS

THURSDAY, 2.30 P.M.

Soda and Sulphate

B. D. MILLIDGE, *Chairman*

The Art of Bleaching in Theory and Practice, C. T. HENDERSON, Westvaco Chlorine Products Corporation (This will be held in conjunction with the Sulphite Group)
The operation of the Cottrell Precipitator, A. A. HEIMROD, Western Precipitation Company
Discussion on Recovery Problems

Sulphite Pulp

VANCE P. EDWARDS, *Chairman*

The Art of Bleaching in Theory and Practice, C. T. HENDERSON, Westvaco Chlorine Products Corporation (This will be held in conjunction with the Soda Sulphate Group)
Wood Room Operation, JOHN FRANK GARRIGAN, Sulphite Superintendent, International Paper Company, Rumford, Maine
Measurement of Sulphite Production by the Use of Flow Meters, R. K. LEAR, Chief Chemist, International Paper Company, Chisholm, Maine

Groundwood

WM. H. BRYDGES, *Chairman*

Groundwood Pulp for High Speed Newsprint, A. W. SIMPSON, General Superintendent, Canadian International Paper Company, Gatineau, Canada
Wood Pulp Operations and Manufacture, A. E. FULLER, Gilman Paper Company, Gilman, Vt.
Round Table Discussions

Tissue

H. H. HARRISON, *Chairman*

Teale Slice for Tissue Papers, BENJ. E. TEALE, E. D. Jones & Son, Pittsfield, Mass.
Automatic Control of Dryers, R. L. GOETZENBERGER, Minneapolis-Honeywell Regulator Company, Minneapolis, Minn.
General Discussion of Drying and other problems

Board

S. M. HESSER, *Chairman*

The Paper Mill Superintendent, ALMERON W. WICKHAM, Superintendent, MacAndrews & Forbes Company
Proper Co-operation and Paper Mill Supervision, E. C. GILDENZOPH, Superintendent, Schmidt & Ault Paper Company
The Duo De-Hydration Press Part for Cylinder Machines (Illustrated), CHARLES L. ELLIS, Vice-president, Downington Manufacturing Company
The Black-Clawson Vat. ALLAN HYER, The Black-Clawson Company

Book and Fine Papers

E. J. MCDONNELL, *Chairman*

Paper Machine Press Rolls, L. M. YOERG, Vice-President, and R. W. PATTISON, Superintendent, American Writing Paper Company, Holyoke, Mass.

Scientific Control as an Aid to the Art of Paper Making, Dr. F. W. Adams, Massachusetts Institute of Technology, Cambridge, Mass.

Paper Industry Standardization of Product and Its Relationship to the Superintendent, F. C. Clark, Vice-President, Skinner & Sherman, Boston, Mass.

Open Discussion on cause and cure of rough and grainy edge paper

1. What is principal cause of rough edges?
2. Can press rolls be ground so as to produce satisfactory edges on High Machine Finish Papers, as well as on Antique Finish Papers?
3. What can be done with Drying Cylinders, to offset increased dryer surface heat on edges of sheet?
4. Does driven Top Press Roll help eliminate rough edges?

FRIDAY, JUNE 22

9.30 A.M. Music Hall, Poland Spring House
General Conference, President Randall presiding
New Stains for Fibre Evaluation and Fibre Identification, Dr. John H. Graff, Institute of Paper Chemistry, Appleton, Wis.
Some Economic Considerations in Selection of Paper Mill Drives, R. R. Baker, Westinghouse Electric and Manufacturing Company
Standard Brightness Tests, Dr. L. C. Lewis, The Mead Corporation, Chillicothe, Ohio

12.30 P.M. Luncheon, Poland Spring House
Toastmaster, John E. Hyde, S. D. Warren Company
Remarks, Hon. Louis J. Brann, Governor of Maine
Speaker, Clifton D. Gray, President Bates College, Lewiston, Maine, "Democracy vs. Fascism"

2.30 P.M. Annual Business Meeting

3.00 P.M. General Conference, President Randall presiding
The Correlation of Research with Mill Operation, Clark C. Heritage, President of TAPPI, Maine Coated Division, Oxford Paper Company, Rumford, Maine
Controlled Production, Arthur C. Smith, Racquette River Paper Company, Potsdam, N.Y.

5.30 P.M. Band Concert, 240th Coast Artillery Band, (H. D.) Maine National Guard

7.30 P.M. Banquet, Poland Spring House, President Randall presiding
Toastmaster, Judge Benjamin Cleaves, Executive Secretary, Associated Industries of Maine
Presentation Past President's Jewel
Presentation L. D. Post Trophy
Presentation Eastwood Golf Cup
Entertainment, Randolph Brooks, Boy Cornetist, Sanford, Maine
Speaker, Major General Smedley D. Butler, retired, U. S. Marine Corps
Convention Ball, Music Hall, Poland Spring House
Music by Lloyd Rafnell and his Georgians

LADIES' PROGRAM

TUESDAY, JUNE 19

All Day Reception and Get-Together for Early Arrivals

8.30 P.M. Music Hall, Poland Spring House
Moving Pictures and Talk on "Fishing and Hunting in Maine," *State Warden*, Joseph Stickney

WEDNESDAY, JUNE 20

A.M. Tour of Grounds
12.30 P.M. Gypsy Luncheon
4.00 P.M. Tea at Poland Spring House—Music
7.30 P.M. Dinner, Mansion House, Mrs. Herbert T. Randall presiding
Entertainment, Larry Grey, "The Dizzy Wizard"
"The Glory of Colour" (Illustrated Lecture), Leonard Craske, Sculptor
Music by Schubert Instrumental Quartet, with Miss Helen Ward, Soloist and Chorus Leader

THURSDAY, JUNE 21

9.30 A.M. Golf Tournament (Ladies)
Clock Golf—Croquet
12.30 P.M. Luncheon, Poland Spring House
2.30 P.M. Bridge Tournament
4.00 P.M. Tea at Poland Spring House—Music
5.30 P.M. Emerson-Mason Dancers on Lawn
"Seaweed"
"Indian Fantasy"
7.00 P.M. Dinner, Poland Spring House
10.00 P.M. Costume Ball
Music by Lloyd Rafnell and his Georgians
Specialty Dancing

FRIDAY, JUNE 22

9.30 A.M. Informal Games, Etc.
Clock Golf—Croquet—Tennis—Golf
12.30 P.M. Luncheon, Poland Spring House
4.00 P.M. Tea at Poland Spring House—Music
5.30 P.M. Band Concert 240th Coast Artillery Band (H. D.) Maine National Guard
7.30 P.M. Banquet, Poland Spring House
Entertainment, Randolph Brooks, Boy Cornetist, Sanford, Maine
Convention Ball, Music Hall, Poland Spring House

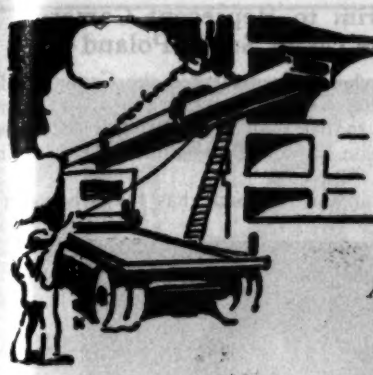
Plan Paper Industry for Tasmania

Plans are under consideration to establish a paper industry in Tasmania, according to a report to the Commerce Department from Assistant Trade Commissioner W. C. Flake, Sydney, Australia. Reports from Hobart, the capital of Tasmania state that within the next two months 2,000 tons of pulp and log timber will be shipped to Canada for a thorough test of its papermaking qualities.

During the past year or two, the report points out, several schemes have been formulated to manufacture paper in Tasmania. According to the press of that State, the company which plans the shipment to Canada for tests has spent £18,000 in preparing to begin operations. If the tests prove satisfactory, the company plans to obtain the services of technical experts to advise on the construction of a mill.

At the present time there are five paper mills in Australia, but none of these are producing newsprint, all of which is imported. During the fiscal year ended June 30, 1933, imports of newsprint totaled 101,612 long tons, valued at £(A)1,290,317, the United States supplying 55,374 tons; Canada, 43,485 tons; Norway, 1,946 tons; Sweden 805 tons; and other countries, 2 tons.

The several paper-making schemes now being discussed in Tasmania, Assistant Trade Commissioner Flake states, contemplate the manufacture of newsprint.



CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Oklahoma City, Okla.—E. K. Gaylord, Oklahoma City, president, Southern Newspaper Publishers' Association, and J. G. Stahlman, Nashville, Tenn., are at head of a project to construct and operate a new news print mill on site in South for production of stocks from Southern pine timber. It is proposed to organize a company to carry out the enterprise. A site will be selected in Georgia or at nearby point for plant, which will consist of group of units for wood pulp production and finished news print. No official estimate of cost has been announced but tentative program is said to represent an investment of more than $500,000, with equipment, as well as development of raw material lands.

Fall River, Mass.—The Fall River Paper and Supply Company, 110 14th street, will proceed with new storage and distributing plant at 14th and Merchant streets, recently referred to in these columns, to replace a unit lately destroyed by fire. It will be two-story, 85 x 100 feet, reported to cost close to $30,000, with equipment. General contract will be carried by J. R. Thornley, 90 Brayton avenue, and different sub-contracts for roofing and sheet metal work, doors and windows, etc., are now being let. S. T. Dubitsky, 38 Third street, Fall River, is architect.

New York, N. Y.—The Corrugated Container Corporation, recently organized with capital of 500 shares of stock, no par value, plans operation of local plant for manufacture of a line of corrugated boxes and containers. New company is represented by Samuel C. Wood, 150 Broadway, city; Evans, Hunt & Rees, 220 Broadway, are attorneys.

Newark, N. J.—The Paper House of New Jersey, Inc., 25 William street, paper stocks, has concluded arrangement for lease of property at 96 Branford place, corner Arlington street, totaling about 8500 square feet of floor space, and will occupy for new storage and distributing plant, and for company headquarters. Company will take possession on August 1, when removal will be arranged from present building to new location, where capacity will be increased. Jacob Bogish is president and Oscar Kaufman, secretary.

Kalamazoo, Mich.—The Allied Paper Mills, Kalamazoo, are reported having work under way on expansion and improvement program at local King Division mills, recently referred to in these columns. Plant capacity will be increased to approximately double present facilities. Entire program will cost over $150,000, including equipment.

West Springfield, Mass.—The Watermark Paper Company, Inc., recently organized with capital of 4000 shares of stock, no par value, is said to be planning early operation of local mill for the manufacture of high-grade writing paper stocks. New company is headed by William J. McGrath, president, and Albert W. Roberts, 13 Davenport street, Chicopee, Mass., treasurer and representative.

Harrison, N. J.—The Reynolds Metals Company, Louisville, Ky., manufacturer of tin foils, foil surface papers, etc., operating the United States Foil Company and other kindred interests, has taken an option for purchase of large three-story building on Cross street, Harrison, formerly used for glass production by the Edison Lamp Works, Inc. New owner will make extensions and improvements in the building, on acquisition, and will occupy for new Eastern plant for production of foil products. General offices of purchasing company are at 19 Rector street, New York, N. Y.

Wausau, Wis.—The Minnesota Mining and Manufacturing Company, 791 Forest street, St. Paul, Minn., manufacturer of sandpaper and other abrasive paper stocks, has awarded general contract to William M. Murphy & Son, New York Building, St. Paul, for proposed additions to raw material plant at Wausau, recently referred to in these columns, and will proceed with superstructure at once, foundations are starting. The new units will be one-story, equipped for crushing, screening, shop, storage and distribution and other service. A new office building will also be erected. Project will cost over $45,000, including equipment. Toltz, King & Day, Inc., Pioneer Building, St. Paul, is architect. William L. McKnight is president.

Ypsilanti, Mich.—The Peninsular Paper Company is maintaining sizable production schedule at local mill, used for the manufacture of card stocks, colored paper specialties, and is giving employment to about 65 operatives in different departments. It is proposed to hold to present basis for an indefinite period.

Port Arthur, Ont.—The Provincial Paper Company, Ltd., University avenue, Toronto, Ont., has plans under way for extensions and improvements in paper mill at Port Arthur, to include a new addition with installation of equipment for increased capacity. Entire project is reported to cost over $100,000, with machinery. It is proposed to proceed with work in near future.

St. Johns, N. B.—The Canadian Bag Company, Ltd., 2485 St. Patrick street, Montreal, Que., manufacturer of paper bags and containers, has tentative plans under advisement for construction of a new one-story plant unit at St. John, reported to cost close to $60,000, with equipment.

Havana, Cuba—The Compania Papelera Nacional, Ltd., Havana, is considering rebuilding of portion of paper mill at Marianao, a suburb of the city, recently destroyed by fire, with loss reported close to $600,000, including main mill, auxiliary structures and equipment. Reconstruction is estimated to cost close to like sum.

New Companies

Waltham, Mass.—Sandpaper, Inc., has been incorporated with a capital of 150 shares of stock, no par value, to manufacture and deal in sandpaper and other abrasive paper stocks. John F. A. Davis is president, and Charles L.

Swan, Jr., 264 Beacon street, treasurer and representative.

New Rochelle, N. Y.—The General Banknote Corporation has been organized with capital of 10,000 shares of stock, no par value, to manufacture and deal in high-grade bank note stocks, bond papers, etc., and watermarked papers. The incorporators are A. Claxton Cary, Carlton court, New Rochelle; and Hayward Halsted, 34 Halsted place, Rye, N. Y.

Detroit, Mich.—The Frank Paper Products Company has been chartered under state laws with capital of $20,000, to manufacture and deal in paper goods of various kinds. L. P. Frank, 19012 Wildemere avenue, is one of the principal incorporators.

Boston, Mass.—The Pilgrim Paper Corporation has been incorporated with capital of $50,000, to manufacture and deal in paper products of different kinds. Benjamin Schwartz is president, and Harry S. Horne, 157 Federal street, treasurer and representative.

Haverhill, Mass.—The United Bag Company has been organized under state laws with capital of $2500, to deal in paper bags and containers, etc. William Vlasopoulos, Haverhill, is president and company representative.

New York, N. Y.—Hearst Paper Products, Inc., has been organized with capital of 100 shares of stock, no par value, to deal in paper goods of various kinds. The principal incorporators are George S. Lawrence, 2411 Seventh avenue, and Mitchinson I. Daniel, 2185 Fifth avenue, both New York.

Paper Makers Directory of Great Britain

The Directory of Paper Makers of Great Britain and Ireland for 1934 has just been issued by Marchant Singer & Co., 15 Nicholas Lane, London, E. C. 4, England.

The new directory has been thoroughly and authentically revised and brought up to date in all its various sections—many new additions have been made in the Trade Designations, also numerous withdrawals and transfers of names in both Actual Watermarks and Trade Names which makes the book of great value to Printers and Stationers and paper buyers generally.

Of particular interest is the special article "The Past Year in the Paper Trade" giving a resume of the effects of the tariffs which have been in force and also a list in detail of the customs duties affecting the paper trade.

In addition to all details and particulars of the paper mills, alphabetical lists will be found of the principal rag merchants, paper stock dealers, waste paper merchants, china clay producers and merchants, etc.

New Specimen Color Book

BOSTON, Mass., June 4, 1934—Paper made by the Champion Coated Paper Company, Hamilton, Ohio, of which the Andrews Paper Company is an agent, was used in a new specimen color book just off the press, produced by the Barta-Griffin Company, 72 Commercial street, Worcester, Mass., manufacturers of printing inks. The book, a beautiful piece of work, is being distributed to the printing trade by the Barta-Griffin Company. In connection with the completion of the book, which contains 126 pages, a meeting of the sales force of that company was held at the Boston Chamber of Commerce last Thursday. Guest speakers, all of whom gave interesting talks, included Earle H. Bean, of the art department of the Barta Press, Cambridge, Mass., and designer of the book; Fred Herbolzheimer, in charge of the fine paper department of the Andrews Paper Company, and Robert Williamson, of T. O. Metcalf, printers. William E. Barta, president of the Barta-Griffin Company, presided.

J. B. Venturini to Represent Cameron Machine Co. at South Poland

J. B. Venturini, who has represented the Cameron Machine Company in the New England territory for a number of years, states that he will be on hand at the Superintendents' Convention to be held at South Poland, Maine, June 20, 21 and 22.

The Cameron Machine Company has taken a booth at

J. B. VENTURINI

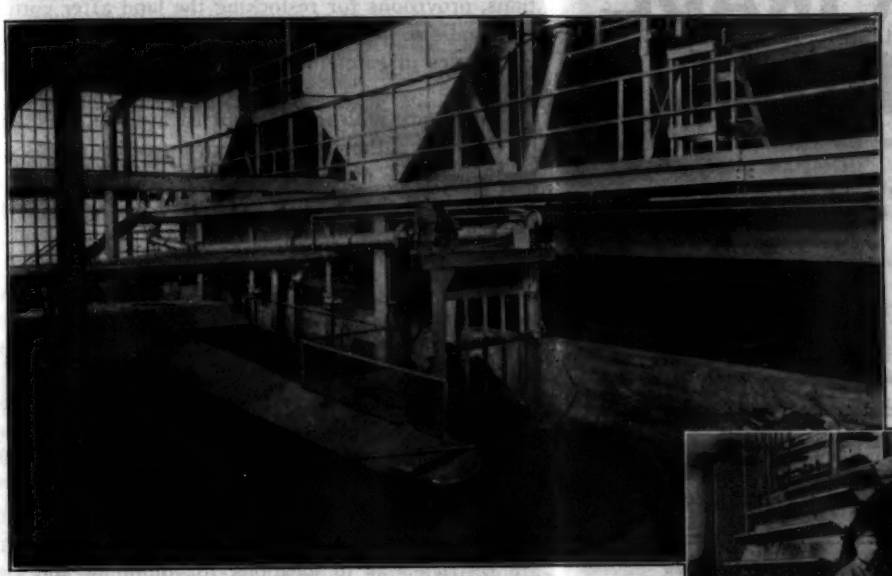
the convention and will have an exhibit there. Mr. Venturini is looking forward to greeting his friends there and telling them of the latest developments in slitting and roll-winding equipment.

Price Bros. Reorganization Plans

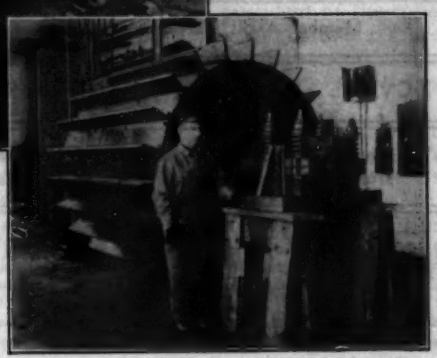
MONTREAL, Que., June 11, 1934—Prospects appear good for the reorganization of Price Bros. & Co. under the amended offer by which the company would come under control of a syndicate composed of interests representing Bowater Paper Mills, London, England, the Duke-Price Power Company, and Lords Beaverbrook and Rothmere, owners respectively of the *London Daily Express* and the *London Daily Mail*. The latest development is that the Protective Committee of common shareholders have joined with other security holders in approving the plan. This committee has sent out a letter to all common share holders recommending acceptance, and urging that proxies be sent in to enable those approving the plan to have it adopted. A meeting of the creditors is to be held at Quebec on June 28, at which the vote of the holders of the common shares will be taken upon a resolution to accept the proposal. On the following day two special meetings of shareholders will be held in Quebec, at which meetings shareholders will be asked to specifically approve the proposal of a scheme of arrangements as submitted by the company and to authorize the necessary acts to give it effect.

New Storehouse for Fall River Paper

FALL RIVER, Mass., June 11, 1934—Sub-contracts have been awarded for the storehouse (damaged by fire) to be erected on Fourteenth street, this city, for the Fall River Paper and Supply Company, 110 Fourteenth street.



This Company operates three Dilts 150 Ton Continuous Beaters and Dilts cleaning and thickening systems.



STOCK PREPARATION

Stock preparation is more important today than ever before.

Dilts continuous beaters; Dilts New Type batch beaters; Dilts New Type refiners and hydrafiners; Dilts keyed type bandless beater rolls; Dilts newest breaker beater roll with (new patent) braced bars; Dilts special alloy heat treated fly bars; Dilts engineers to plan your mill improvements and advise with you throughout; Dilts, in fact, to furnish your entire stock preparation equipment.

Sixty-five years of experience building Dilts beaters for paper mills in five continents.

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PAPER TRADE JOURNAL
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COMING EVENTS

American Pulp and Paper Mill Superintendents' Association, annual convention. Headquarters Poland Spring House, South Poland, Me., June 20-22, 1934.

Technical Association of the Pulp and Paper Industry, Fall meeting. Headquarters Multnomah Hotel, Portland, Ore., September 10-13, 1934.

FOREST CONSERVATION RULES TO INCREASE EMPLOYMENT

The planned protection of the country's timber resources as provided in the rules of forest practice, now being submitted to the National Recovery Administrator, under a provision of the lumber and timber products code, approved some time ago as Schedule C by President Roosevelt, will furnish employment to thousands of men, it is estimated.

While no accurate figures have been compiled as yet, it is, beyond question, a fact that the forest guards, forest fire fighting units and increased logging staff made necessary under the new rules will absorb a great number of the unemployed in districts where the country's 400,000,000 acres of timber land are located.

Part of the success of the program is dependent upon a certain amount of cooperation on the part of the Federal Government. While many thousands of men will be taken on as a direct result of the adoption of the rules as submitted, it is estimated that the eventual working of the entire project will result in the employment of 120,000 more men. Of his number, approximately 100,000 would be absorbed by private industry and 20,000 by government service.

Each of the ten forestry divisions prescribed by the lumber code has submitted a list of rules which, while differing in details, are all aimed at the same objectives. In the main, these are to prevent forest fires during and immediately following logging operations, the preservation of immature trees and young growth during logging operations, provisions for restocking the land after cutting and systematic cooperation of forest owning groups and public authorities in extending protection against all destructive agencies.

Compliance with the rules of each division as approved by the code authority will require greatly increased staffs throughout the industry. Means must be taken to watch for fires and the rules of practically all the divisions call for the organization and equipment of trained and mobile fire fighting units. The universal requirement that all "slash and snaggs" and other debris usually left after logging operations, be removed will call for increased logging gangs and general supervision of the enforcement of the rules will also call for more men.

The forestry rules as submitted to the Administrator however go further than this and strike at some of the practices which have in the past often resulted in the destruction of millions of dollars of valuable timber. Locomotives used in logging operations must be provided with spark and live coal arresting devices and their engineers are restricted as to locations for dumping and cleaning fires. Use of fire in the woods by employees, which specially includes smoking, is carefully regulated and, regardless of any general fire-fighting organization in operation, each logger is held responsible for any hazard he creates.

Sawmill companies and non-operating timber owners are also required to cooperate with government agencies not only for the prevention of fire but also for protection of timber against attacks of insects and disease as well.

While the rules for the protection of immature trees and young growth are all directed toward encouragement of natural regeneration of forests, they vary widely as to regions and species. On the western slopes of the Sierras, for instance, pine trees less than twenty-two inches in diameter must be left standing, while the same species east of the mountains may be cut when they are only thirteen or fourteen inches thick. Because tamarach furnishes such a haven for insects and is so susceptible to disease, and because the small poles are needed in the mines, they may be cut if over four inches in diameter. In southern pine areas the regulations provide for leaving a certain number of small trees per acre, and if no small trees are on the stand two seed trees of twelve inches in diameter or over must be left standing.

Other strict rules govern the use of tractors and such equipment and restrict the manner in which the woods may be cut up by roads. Some of the divisions direct the fencing of reforested tracts against hogs and other domestic animals which have a tendency to injure the young trees.

In transmitting the forest rules to the National Recovery Administration, the Code Authority pointed out that this was as far as the industry could go. To make it permanently effective it would be necessary for the Federal Government to bring about certain reforms and changes, namely, forest and forest industry loans and credits, a reform of the timber tax, forest fire protection and forest timber land acquisition.

Viewed from certain angles, this, the PAPER TRADE JOURNAL believes, is a commendable project. It will increase employment, which is much to be desired and it will furnish protection to the country's timber resources, which must meet with the approval of every public spirited citizen. But it is an expensive undertaking and apparently places an additional tax yearly of $200,000,000 on a private business in which the paper industry is greatly interested. This tax cannot fail to prove burdensome. It is to be hoped that the day is not remote when such taxes will cease to be imposed.

Dr. Herty Announces Discoveries

A press dispatch from Savannah, Ga., says that:

"Dr. Charles H. Herty, director of the Savannah Paper and Pulp Laboratory, has announced three important discoveries in the experimental work of the laboratory made in the past two days.

"The discoveries, which Dr. Herty said had 'knocked down the only arguments the Northern manufacturers had left,' were:

"1. The successful pealing of pine for white paper in a barking drum.

"2. The use of pine sadly affected with blue stain or mole in a recent experiment, resulting in the dark blue of the fungus's neutralizing the yellow of the pulp, to turn out 'beautiful white paper.'

"3. Preliminary experiments with local purified sulphite pulp show that the alpha cellulose content is much higher than that of spruce, thus opening, he said, a field here for the manufacturing of rayon, lacquer, cellulose and other similar products.

"Dr. Herty said that in a test made this week pine pulp barked perfectly in a barking drum, along with spruce, under regular commercial conditions in a regular commercial mill. This point was often raised against the use of pine in making white paper.

"Relating his experiments with the pine wood affected with blue stain, Dr. Herty displayed samples of the white paper resulting from the test, and said he planned to follow up the initial steps. The wood used was five weeks old.

"It has been argued that pine left in the open for a space of ten days would acquire fungus growth and become useless for manufacture of white paper."

Big Arrivals of Wood Pulp at Albany

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., June 11, 1934—About 16,000 tons of wood pulp from Scandinavian countries is scheduled to arrive at the local port terminal this month. A large consignment reached here from Sweden early this week and two other vessels are scheduled to follow later in the month. It is understood that a large part of these cargoes will be sent to the mills of the Union Bag and Paper Company, at Hudson Falls.

To Market New Cigarette Paper

[FROM OUR REGULAR CORRESPONDENT]

WINDSOR LOCKS, Conn., June 12, 1934—C. H. Dexter & Sons, after a year and a half development, have perfected a high grade cigarette paper, thus being ready to enter the market against foreign-made cigarette paper, a large part of which is made in France. They are also about to put out a new tissue paper designed to take the place of tissue, heretofore made exclusively by the Japanese. It will be marketed under the name of Japotex.

Paper Chemistry Institute Awards Degrees

Commencement day at Lawrence marked the termination of four and one-half years of educational and research work by the Lawrence College Institute of Paper Chemistry, at Appleton, Wis., and with the granting of Doctor of Philosophy degrees to five students it becomes the second year that Lawrence has offered this advanced degree. Those who received the degrees are: Richard C. Crain, Frankfort, Ind.; Martin L. Downs, Reading, Pa.; Walter F. Holzer, North Portland, Ore.; Henry E. Obermanns, Erie, Pa.; and Sam J. Robinson, Des Moines, Iowa.

Master of Science degrees were awarded to: Earle O. Bryant, Clinton, N. C.; Ward D. Harrison, Mason City, Iowa; James W. McIntyre, Freeport, Pa.; Charles E. Roth, Dayton, Ohio; Robert D. Rusch, Neenah, Wis.; Harold C. Sperka, Oshkosh, Wis.; John C. Tongren, Ridgway, Pa.; LaVern A. Gilbertson, LaCrosse, Wis.

The degrees were conferred at the eighty-fourth annual commencement exercises at Lawrence on Monday, June 11 by Dr. Henry M. Wriston, president of the college and director of the Institute. The candidates were presented by Dr. Henry F. Lewis, dean of the Institute, and they were invested with their hoods by Dr. Otto Kress, technical director.

Richard C. Crain entered the Institute in 1930 after receiving his B.A. with a major in chemistry from Wooster College, Wooster, Ohio, in 1930. In 1931 he received his M.S. from the Institute of Paper Chemistry. Mr. Crain is now employed by the Whiting-Plover Paper Company, Stevens Point, Wis. The title of his Doctor's thesis is "A study of bleaching of rag half stock by calcium hypochlorite solutions."

Martin L. Downs received his B.S. degree in chemistry in 1931 from Pennsylvania State College, and entered the Institute that fall. In 1932 he received his M.S. degree from the Lawrence Institute. He is employed by the Mead Corporation, Chillicothe, Ohio. The title of his Doctor's thesis is "An analytical study of various pulps with reference to alkali binding and rosin sizing."

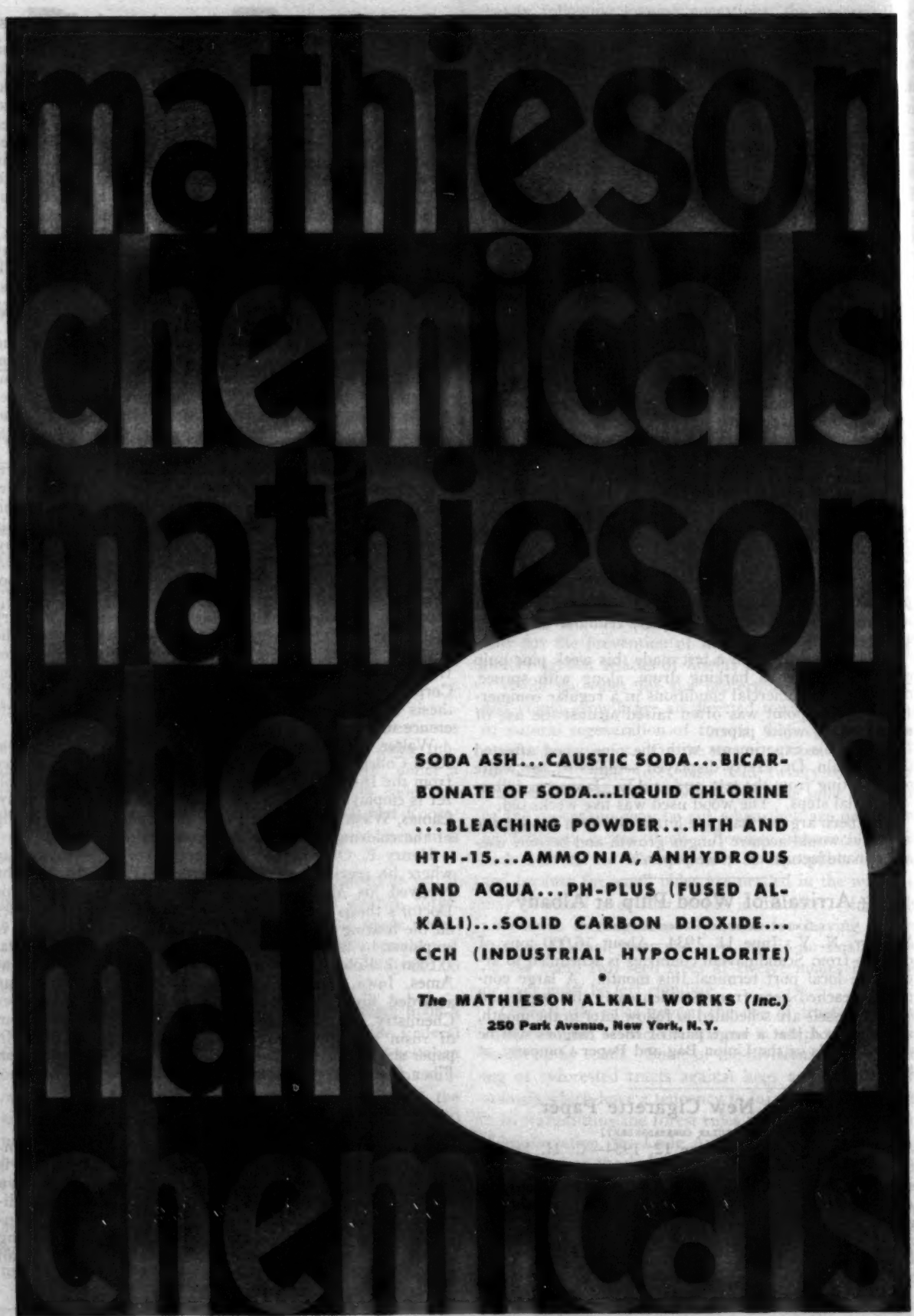
Walter F. Holzer was awarded his B.A. degree from Reed College, Portland, Ore., in 1929, and his M.S. degree from the Institute of Paper Chemistry in 1932. Mr. Holzer is employed by the Crown Willamette Paper Company, Camas, Wash. The title of his Doctor's thesis is "A study of the coloring matter in pine kraft pulps."

Henry E. Obermanns is a graduate of Yale University where he received his B.S. degree in 1930. In 1932 he received his M.S. from the Institute. The title of his Doctor's thesis is "A study of the effect of hemicelluloses on the beating and strength of pulps." Mr. Obermanns is employed by the Hammermill Paper Company of Erie, Pa.

Sam J. Robinson is a graduate of Iowa State College at Ames, Iowa, with a B.S. degree, and in 1932 he was awarded his M.S. degree from the Institute of Paper Chemistry. His Doctor's thesis is written on "The system of rosin size, alum, and fiber as related to problems in paper sizing." Mr. Robinson is employed by the Champion Fiber Company of Canton, N. C.

Gilman Paper Co. Enlarging Plant

GILMAN, Vt., June 11, 1934—The Gilman Paper Company of this village, the largest of its kind in Vermont, is adding a second story to one of its buildings to be used as a finishing room. It is of brick construction with floor dimensions 240 by 52 feet. Just at present the mill is manufacturing only kraft paper, while its bag mill is busy filling orders for onion bags, cement bags and paper bags of all sizes. They now employ 560 men and women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Section of the
Technical Association of the Pulp and Paper Industry
Edited by Ronald G. Macdonald, Secretary

The Adsorption of Zinc Chloride By Cornstalk Insulating Board Pulp

By L. K. Arnold [1] and D. L. Gleaves [2]

Abstract

Zinc chloride which is added to insulating board to retard attack by molds and insects is readily incorporated into the board by mixing with the refined pulp before forming into the wet mat and drying. Enough zinc chloride must be added to the pulp suspension so that the total amount contained in the water which is retained by the board as it goes to the drier together with that adsorbed upon the fibers is sufficient to give the amount desired in the finished board. The calculation of the amount retained in the board would be simple if no adsorption took place since the amount of moisture retained in the mat of board is known for the standard manufacturing processes. Since no data could be found in the literature on the adsorption of zinc chloride by cornstalk insulating board pulp a study of the adsorption was made.

Analytical Procedure

As no procedure for the determination of $ZnCl_2$ in insulating board could be found, it was necessary to develop a suitable method.

The first procedure tried was as follows: Weighed samples of the board were ignited or "smoked off" at a low temperature in an effort to remove most of the organic matter without volatilizing the $ZnCl_2$. $ZnCl_2$ boils at 730 deg. C. and volatilizes considerably at a much lower temperature so that it was necessary to keep the temperature low. The black residue resulting from the ignition was leached several times with hot dilute HCl. The leaching was carried out with dil. HCl instead of water in order to convert any insoluble basic $ZnCl_2$ which might be formed to the soluble $ZnCl_2$. The leachings were combined and the amount of zinc chloride determined by the standard A.S.T.M. volumetric method of titrating with potassium ferrocynide using uranyl nitrate as an outside indicator. (A.S.T.M. Standards: 254-62 (1933).

This method has several shortcomings. It is difficult to eliminate the organic matter without volatilizing off the zinc chloride. There is also the possibility of adsorption of $ZnCl_2$ by the charcoal in the leaching process. This method was checked on a series of boards made up from pulp to which had been added from 1.0 to 20.0 grams of zinc chloride to each 50 grams of dry pulp. The total zinc chloride in the white water[3] from the board was determined by titration without preliminary treatment. The zinc chloride in the board was determined by the method outlined and the highest value of several titrations reported (Table I). The highest value was taken as the most probable value since the nature of the method made the probable error in results one of too little rather than too much $ZnCl_2$. A comparison of the total amount of zinc chloride found by analysis of the white water and the board with that actually added to the pulp shows that with one exception the error in the determination is between 1.0 and 4.0 per cent when using the most probable values.

TABLE I.
RESULTS OF ZINC CHLORIDE DETERMINATIONS LEACHED CALCINED BOARD

Zinc chloride in grams				Per Cent Error in Determinations
Total Added	In White Water	In Board	Total Found	
1.0	0.326	0.677	1.003	+0.3
2.0	1.214	0.868	2.082	+4.0
4.0	2.900	1.161	4.061	+1.5
6.0	4.540	1.531	6.071	+1.2
8.0	6.350	1.560	7.910	—1.1
10.0	8.300	1.560	9.860	—1.4
20.0	17.300	2.480	19.780	—2.2

In an effort to eliminate the organic matter, samples of the board were subjected to a Kjeldahl digestion using 125 cc. of concentrated H_2SO_4 and 25 grams Na_2SO_4 to 10 grams of dry board. The digestion required 25 hours for completion. The long digestion time could doubtless be shortened by the use of a catalyst but none was used since it was believed that the usual catalysts would interfere with the final titration.

The Zn was determined by both the volumetric method and by a gravimetric method in which the Zn was precipitated by di-ammonium phosphate ($(NH_4)_2HPO_4$) from a slightly acid solution forming zinc-ammonium phosphate ($ZnNH_4PO_4$). The close agreement of results both between the two methods and with the amount originally added to the board indicate that the method is probably quite acurate. However, this method was abandoned before enough determinations had been made to establish

[1] Assoc. chem. engineer, Engineering Experiment Station, Iowa State College, Ames, Iowa.
[2] Senior analyst, Eng. Exp. Sta., Iowa State College, Ames, Iowa.

[3] White water is the water drained or sucked from the pulp suspension during the formation of the mat of board.

TABLE II
RESULTS OF REPEATED LEACHINGS

No. of Leachings	Zinc Chloride found in grams
1	0.3190
2	0.1925
3	0.0427
4	0.0243
5	0.0015
6	0.0000

its accuracy since the long digestion time made it unsuitable for ordinary use.

An attempt was next made to leach the wet mat of pulp directly with slightly acidified hot water but the resulting solution contained so much organic matter that accurate titration was impossible.

Cold leaching of the board gave a solution free from the undesirable organic matter of the hot leached solution. To determine the number of leachings required to remove all of the $ZnCl_2$, a sample was leached six times and the amount of zinc chloride in each leaching determined. The results (Table II) indicate that five leachings are sufficient. Six leachings were used in all subsequent work.

A comparison of the amount of $ZnCl_2$ found by the cold leaching method and that actually added to board pulp (Table III) shows an error of less than one per cent, for amounts of zinc chloride added to the pulp of between 4 and 12 per cent of the weight of the dry board. The error when 2 per cent was added is somewhat higher. It is believed that this is a practical method for determination of zinc chloride in the board.

In an effort to secure a more rapid method, samples of pulp were added direct to acidified water and the solution titrated without removing the pulp. The results by this method were low. For rapid control work the most satisfactory method would be to titrate the white water and calculate the amount of zinc chloride in the board as discussed later. As may be seen by the data in Table 3, this would give results sufficiently accurate for many purposes.

The Adsorption of the Zinc Chloride

Cornstalk board pulp was made up as follows: cornstalks were shredded, digested in water at 90 to 100 deg. C. under atmospheric pressure for 4 hours, and refined in a rod mill and an attrition mill. The pulp was made up to a consistency of 2.5 per cent and the desired amount of zinc chloride added. Sufficient pulp was taken to produce a dry board weighing 50 grams and formed into a mat on

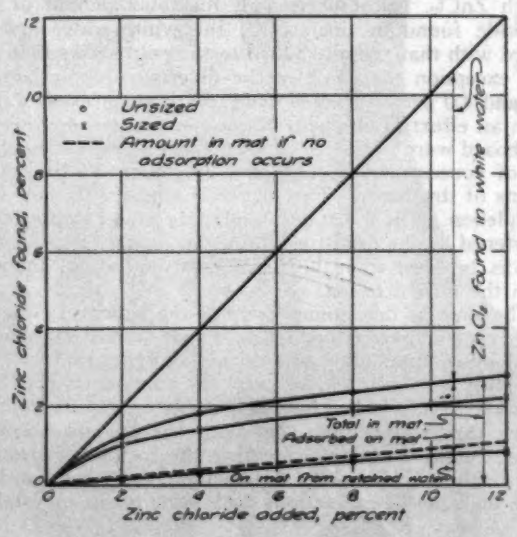

FIG. 1.
Distribution of zinc chloride between board and white water.

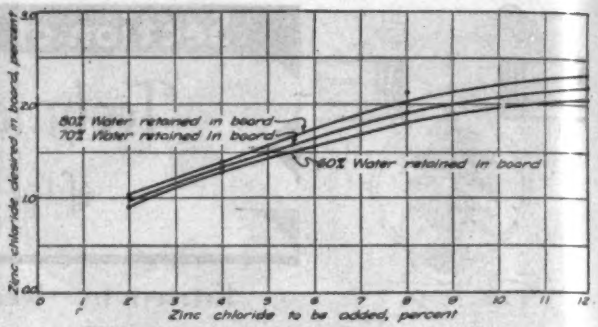
80% Water retained in board
70% Water retained in board
60% Water retained in board
Zinc chloride desired in board, percent
Zinc chloride to be added, percent

FIG. 2.
Relation of the amount of zinc chloride to be added to the amount desired.

a Büchner funnel. The mat was sucked to a moisture content of about 70 per cent, approximating that of the mat from the factory forming machine.

Approximately one-fifth of the wet mat was then weighed, removed, and leached 6 times, each time with 200 cc. of 1.0 per cent HCl. The zinc chloride in both the white water and the solution leached from the mat was determined by titration with potassium ferrocyanide. Blanks were run on pulp not containing zinc chloride and results corrected accordingly.

A second batch of pulp was prepared in the same way except that after addition of the zinc chloride and before formation of the mat, 3 per cent rosin size was added. After thorough mixing, sufficient aluminum sulphate was added to bring the hydrogen-ion concentration to pH4.5 and the mat formed.

The distribution of the $ZnCl_2$ between the white water and the board is summarized in Table IV and Fig. 1. The total amount of zinc chloride in the finished board is the sum of the amount adsorbed and the amount contained in the water retained by the board mat as it enters the drier. The amount of zinc chloride in the suspension water should not be confused with amount added to it. As adsorption takes place, the concentration of zinc chloride in the water is reduced to an equilibrium value which is less than that resulting from the addition of $ZnCl_2$. The adsorption is calculated as the amount of $ZnCl_2$ present in the mat in excess of that produced by the $ZnCl_2$ present under the new equilibrium conditions in the water retained in the pulp. The total amount of $ZnCl_2$ in the finished board is less than the sum of that adsorbed by the board

TABLE III
RESULTS OF ZINC CHLORIDE DETERMINATIONS—COLD ACID LEACHING

Type of Pulp	Zinc Chloride in Grams: Total Added	In White Water	In Board	Total Found	Per Cent Error in Determination
Unsized	1.0	0.398	0.642	1.040	+4.0
	2.0	1.110	0.892	2.002	+0.10
	4.0	2.860	1.118	3.978	—0.55
	6.0	4.730	1.264	5.994	—0.15
Sized	1.0	0.513	0.448	1.0175	+1.75
	2.0	1.320	0.505	1.982	—0.90
	4.0	3.079	0.954	4.033	—0.82
	6.0	4.875	1.090	5.965	—0.60

TABLE IV
ZINC CHLORIDE DISTRIBUTION AT EQUILIBRIUM

Type of Pulp	Percentage added: Of total water, weight	Of dry fiber, weight	Percentage of equilibrium: On Basis of Total Zinc Chloride Added: Total in mat	Absorbed on mat	In white water	In white water (percentage of total water)
Unsized	.05	2.0	64.2	59.4	39.8	.020
	.100	4.0	44.6	38.1	55.5	.056
	.200	8.0	28.0	20.0	71.5	.146
	.30	12.0	21.1	13.7	78.9	.242
Sized	.05	2.0	50.5	44.8	51.2	.026
	.10	4.0	33.1	25.7	66.0	.067
	.20	8.0	23.8	14.5	76.9	.157
	.30	12.0	16.2	10.7	81.3	.250

and the amount which would be retained by the board if no adsorption took place.

In the commercial production of a board containing $ZnCl_2$ it is desirable for reasons of economy to avoid wasting any of $ZnCl_2$ by throwing it away with the white water. This makes it necessary to reuse the white water as completely as possible. If the usual method of operation is followed this is not practical as will be seen from the following data: The pulp from the rodmill will contain approximately 18,000 pounds of water per ton of dry pulp. It is then diluted to a suitable consistency for final refining and finally diluted to a consistency of about 2.5 per cent as it goes to the forming machine. This brings it to the forming machine with 78,000 pounds of water per ton of pulp. The board mat will leave the forming machine with 70 per cent moisture or 4,667 pounds of water per ton of dry fiber. It will be noted that with the greatest possible reuse of the white water an amount equivalent to the difference between that in the pulp from the rod mill and the finished mat of board or 13,333 pounds per ton of board must be thrown away. In practical operation this difficulty has been gotten around by pressing the pulp from the rod mill down to a moisture content as low as that of the finished mat of board. If this method is used after the system is tuned up, the white water will be run back to dilute the pulp going to the final refiners and before going to the forming machine. It will then only be necessary to add sufficient zinc chloride to equal that desired in the board. Since the white water should contain a constant amount of zinc chloride, control of the amount of $ZnCl_2$ in the board could be maintained by determining the amount in the white water, by simple titration. This assumes operation such that the moisture content of the pulp from the rod mill and of the mat of board from the forming machine is kept constant.

Testing the Water Resistance of Fiber Board

Several years ago the National Bureau of Standards developed a simple test for the water resistance of paper, but not until recently did it develop the technique of applying the test to very resistant papers and fiber boards. The test consists of sprinkling a water-sensitive powder, composed of a mixture of pulverized sugar and a dye, on one surface of the sheet and wetting the opposite surface. The time required for water to pass through the sheet in sufficient amount to color the indicator powder is a measure of the relative water resistance. The more recent developments in the technique of the method are described by F. T. Carson in PAPER TRADE JOURNAL. They involve sealing a transparent, moisture-proof cover over the indicator powder and sealing the edges with wax so that no moisture can reach the indicator except through the specimen, and so that once there the moisture can not evaporate and escape action on the indicator powder. Some suggestions are made toward fixing more definitely the end point.

Some simple pieces of apparatus are described and illustrated, including a desiccator and shaker for the indicator powder and a rack for simultaneously placing several specimens in contact with the water.

Finnish Woodpulp and Board Souvenir

In commemoration of its fortieth anniversary, the Finnish Woodpulp and Board Union has just published a handsome volume, profusely and artistically illustrated, containing a concise description of the origin and development of the Finnish woodpulp industry, in addition to data regarding the concerns affiliated to the Union.

New TAPPI Members

The Executive Committee of the Technical Association of the Pulp and Paper Industry have announced that the following have been elected to membership:

Uno G. Fryklund, kraft pulp mill superintendent, St. Helens Pulp and Paper Company, St. Helens, Ore., is a 192 graduate chemical engineer of Harnosands Tekniska Skola of Sweden. He was formerly chemist for the Tomahawk Kraft Paper Company, Tomahawk, Wis.; assistant general superintendent of Calcasieu Sulphate Paper Company, Elizabeth, La.; and kraft pulp mill superintendent of Stromnasbruks A/B of Delary, Sweden.

William A. Geiger, sales department, Pulp Division, Weyerhaeuser Timber Company, Chicago, Ill., is a 1931 graduate of Dartmouth College.

Thomas R. Johnson, control chemist, Canadian International Paper Company, Hawkesbury, Ontario, is a 1920 graduate of the College of Technology of the University of Manchester, England, and was formerly employed by the Star Paper Company, Ltd., Blackburn, England; Bowater Paper Mills, Northfleet, England; and the Canadian International Paper Company at Temiskaming, Ontario.

William E. Greene, president of W. E. Greene Corporation, New York, N. Y., is an 1897 graduate of Williams College. Mr. Green was formerly manager of the Boston Belting Company.

Maurice N. Labelle, chemist, Tileston & Hollingsworth Company, Boston, Mass., is a 1920 graduate of McGill University and was formerly employed by the Abitibi Power and Paper Company, Iroquois Falls, Ontario, the Chemical Paper Manufacturing Company, Holyoke, Mass., and the American Writing Paper Company, Holyoke, Mass.

E. L. Tewksbury, sales manager, of Stowe-Woodward, Inc., for the past ten years, was formerly sales manager of the Boston Belting Company for twenty-two years.

James A. Yates, development engineer for the Brown Company, Berlin, N. H., is a graduate of William Jewell College (Liberty, Missouri), and the Massachusetts Institute of Technology.

Union Bag & Paper Corp. Joins TAPPI

The Union Bag and Paper Corporation of Hudson Falls, N. Y., has recently become a corporate member of the Technical Association of the Pulp and Paper Industry.

This famous old company manufactures 150 tons of bag and kraft papers daily at Hudson Falls, N. Y., and Kaukauna, Wisconsin. Its bag factories are located at Hudson Falls, N. Y.; Chicago, Illinois; Bogalusa, Louisiana; Long Island City, N. Y.; and Vancouver, Washington. It owns as subsidiaries the Scutan Company and the Columbia Bag and Paper Company.

The officers of the company include Alexander Calder, President and Treasurer; John Wohnsiedler, Vice President; S. H. Brown, Secretary. The Union Bag and Paper Corporation is represented in the Technical Association by Mr. J. Gamble.

Holyoke Water Power Co.'s Annual Shutdown

HOLYOKE, Mass., June 12, 1934—Notices were sent out the past week by the Holyoke Water Power Company of the annual shutdown when the water will be drawn from all the canals so the users of hydraulic power may make such minor or other repairs as is annually needed. The water will begin to be drawn from the canals the morning of August 3 at 6 A. M and the canals will be full again the morning of August 6, at 6 A. M.

Optical Properties of Paper

S. A. Staege[1]

No one likes to see a fine advertising cut or picture ruined by printing showing through from the back side of the sheet. Nor is the reading comfortable when the contrast between print and the sheet is disturbed by dark shadows and "show through" from the other side. Paper contracts have often been lost because of troubles of this kind, and thousands of dollars could be saved by knowing how to measure the optical properties of paper and thereby secure greater uniformity. Book and magazine papers often vary considerable in opacity from page to page, variations of as much as 10 to 15 per cent in the amount of light transmitted through the sheet being frequently found. Uniformity is the exception rather than the rule. Why pay for or manufacture unnecessary weight and non-uniformity that can be avoided?

We are accustomed to think of lenses, prisms, mirrors, glass, fluids, etc., only, as having optical characteristics. Paper, however, has quite similar and perhaps equally as important optical properties. It reflects, refracts, absorbs and transmits light and has varying degrees of opacity, transmittancy and transparency. A sheet of paper may be opaque or it may be transparent, or it may have an infinite number of degrees of light transmittancy between these extremes. In magazine and book papers we do not want the light to show through, but in the case of a fancy box of candy every detail of cover design must show through the protecting wrapper with utmost fidelity. "Show through," as will be seen, is a characteristic to be avoided in printing papers and to be secured in transparent wrappings. The eye can distinguish between relatively small degrees of difference in opacity or transparency but it cannot define these values and it has been extremely difficult in the past, if not quite impossible, to specify requirements. However, a new photo-electric device now measures the opacity or transparency instantly and by the reading of a meter gives the result in transmittancy, the percentage of light transmitted through the sheet.

Varying degrees of opacity are tolerated in papers for different uses and for different publications. Some purchasers can afford the use and cost of a highly opaque sheet, while others must be content with a more remote approach to the ideal opacity. Similarly, there are varying degrees of transparency tolerated in papers used for wrapping merchandise of display type.

Present conditions have emphasized the necessity for cost reduction where possible and one of the most obvious ways to do this in the case of printing papers would be to cut down on paper weight if this could be done without sacrifice in opacity or without increasing the transmittancy beyond permissible limits. Without reliable standards of transmittancy or opacity or instruments with which these quantities could be accurately measured, the user could not specify, nor could the manufacturer furnish paper with uniform light transmittancy characteristics of the value needed for a particular use or application. The result has been that a paper varying more or less in transmittancy has been used but heavy enough so that where it is lightest it would still be not too transparent. This has resulted in the use of heavier and more expensive paper than was really necessary if only greater uniformity in transmittancy or opacity could be obtained. Not only has this inability to specify and obtain paper of a minimum weight consistent with maximum permissible transmittancy resulted in a higher paper cost, but the mailing cost of the printed magazine and the freight on the unprinted paper may far exceed that which would be necessary with paper of the optimum weight and satisfactory degree of opacity.

Opacity Factors

The variations in opacity or transmittancy of printing papers may be caused by variations in weight, which as indicated, may amount to 10 or 15 per cent, which indicates something of the savings which might be made if the paper purchased could be held to closer tolerances. Variations in the transmittancy of the sheet may also indicate lack of uniformity in formation, variations in "loading," non-uniformity in density due to poor calendering or a variety of other causes. The manufacturer is, of course, interested in the quality of the paper which he offers to his customers, and the price which he gets for it. The orders which he obtains often depend in a large degree upon the characteristics under discussion, and it is up to the mill to produce the product required by the purchaser. In the past this has been difficult to do but now with adequate instruments at his disposal for testing, much greater precision can be obtained to the benefit of all concerned.

Another factor which has resulted largely from the efforts to economize in paper cost has been the development and perfection in the use of other pigments and "loading" material for increasing the opacity of the sheet, or making possible the use of a lighter weight sheet without increasing its transmittancy. Through the use of a suitable instrument which will measure accurately the opacity, or percentage of light transmitted through the sheet, scientific and economic studies can be made of the various pigments and loading materials to determine their exact effect and whether the use of such pigments or loading materials are an economical method of obtaining the required opacity of the sheet.

The new photo-electric device referred to uses the Photox cell, which has a color sensitivity practically identical with that of the human eye, having its maximum sensitivity where the eye is most sensitive and with no sensitivity whatever in the infra-red. This makes it ideal for the

Received May 10, 1934.

[1] Member TAPPI, Engineering Div., Westinghouse Electric and Manufacturing Company, E. Pittsburgh, Pa.

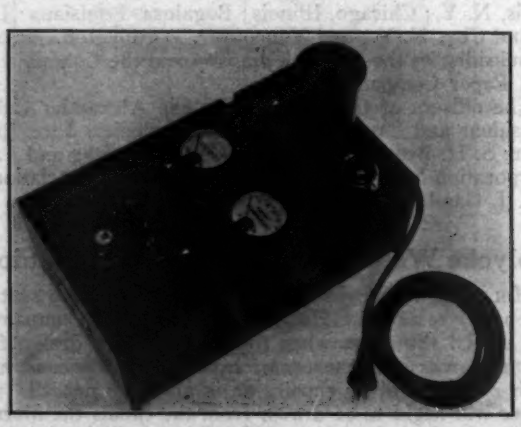

FIG. 1.

Westinghouse Trans-O-Meter showing regulator, instrument and photox cell.

measurement of paper opacity or transmittancy, as the cell "sees" the paper just as the eye sees it.

The Trans-O-Meter

In the operation of this device the Trans-O-Meter instrument is adjusted to full scale, or 100 per cent, by means of a potentiometer knob, when the full intensity of the light is striking the cell, without anything between the light source and the Photox. Then the sheet, of any size, is placed in position, in direct contact with the Photox unit, between it and the light source, so that only the light passing through the sheet reaches the cell. The Photox, connected to a suitable micro-ammeter, generates a current in accordance with the amount of light striking it, and therefore now indicates directly the percentage of light passing through the sheet, or its transmittancy. Paper opacity is generally considered as 100 minus transmittancy and an opacity scale can, therefore, also readily be provided.

The term "transmittancy" to denote the percentage of light transmitted through the sheet, is used instead of transparency because of the stricter definition of the word transparency implies seeing clearly through the medium, which is not the case with most papers especially if not closely in contact with the object being seen as the rays of light are scattered in passing through the sheet, making clear vision and good definition impossible. Transmittancy, however, takes into account all of the light passing through the sheet whether the rays are parallel or scattered and indicates the extent to which black print on the back side of the sheet or any dark figures would show through.

In order that the light source may be held at constant intensity a voltage regulator without moving parts compensates for any changes in line voltage of the lighting circuit to which the instrument is connected, making possible reliable observations and test readings. Inasmuch as it is only necessary to read the meter to determine the transmittancy or opacity of the sheet, an expert is not required and anyone who can read the figures on the instrument dial can quickly and accurately determine the transmittancy characteristics of the sheet. Only one reading is required and no calculations are necessary so that a long strip of paper taken across the machine can be drawn slowly through the meter if desired and any variations in its transmittancy noted. Inasmuch as the transmittancy is ordinarily a fairly accurate measure of the thickness of the sheet any variations in the weight can in this way also be determined.

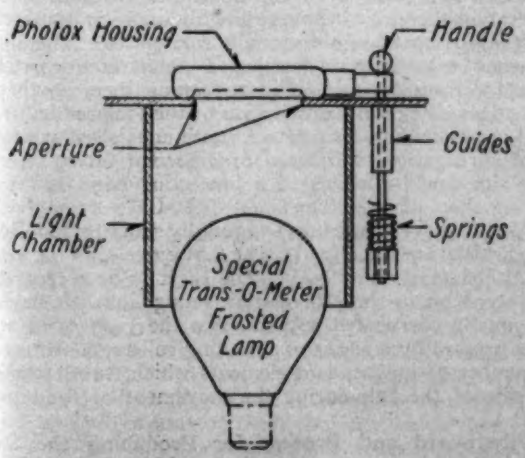

FIG. 2.
Optical system of Trans-O-Meter. Handle is raised to slip sample sheet under photox cell.

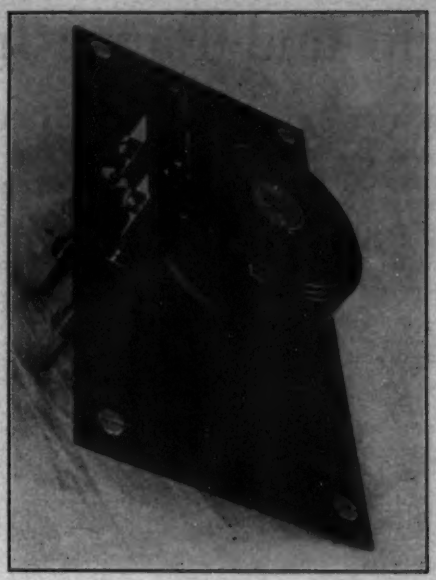

FIG. 3.
Photox cell mounting showing spring returned guides and plate for supporting samples.

The orifice opening in the Trans-O-Meter through which the light reaches the Photox cell is nearly two inches in diameter, or approximately 3 square inches in area, which is large enough to cover a good average section of paper and not likely to be affected by the fine variations in the mottling effect of the sheet. A special mask is provided by means of which the margin of a printed page may be tested; and an adjustment can be made by means of which the sensitivity for sheets below 25 per cent transmittancy, can be increased four times. The Trans-O-Meter is intended for both laboratory and production testing of paper and other materials. As will be seen from the illustration, it is a compact portable instrument usable alike by the paper manufacturer and user.

Curl Tester in Wet-Intaglio Printing Process

The Curl Size Tester, devised by F. T. Carson at the National Bureau of Standards, has been found of value in testing the water resistance of bank note paper printed by the wet-intaglio process. In this process, the paper is moistened for printing to obtain a certain degree of softness. If it is too resistant to water the moistening operation is slowed and if too absorbent, the wetted sheets may be too soft and flabby for satisfactory printing. The use based on the property which paper possesses of curling about an axis parallel to the grain of the paper when one side of it is wetted by water. The paper curls until the water has permeated half way through then starts to uncurl, and the time of curling is used as a measure of the water resistance.

Swedish Newsprint Production Gains

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., May 29, 1934—Reports to the Department of Commerce state that the Swedish newsprint mills produced 19,514 metric tons of newsprint paper during March, bringing the total for the first quarter of this year up to 60,322 tons as against 53,450 tons during the corresponding three months of last year.

Pulp and Paper Industry Literature Review

Abstracts of Articles and Patents Compiled by the Abstracts and Bibliography Committee of the Technical Association of the Pulp and Paper Industry, A. Papineau-Couture, John F. Ohlson, C. E. Peterson and Clarence J. West, Chairman

Copies of United States Patents can be obtained from the United States Patent Office, Washington, D. C., for 10 cents each. Send currency, not stamps.

Paper Specialties

Photographic Raw and Baryta Papers; Heliographic Papers. M. Renker. Papier-Ztg. 58, no. 88:1478, 1480, 1482, 1484, 1486 (Nov. 4, 1933.)—The paper discusses briefly and in general the manufacture of photographic raw papers and the different types of heliographic paper. The author points out that no directions are sufficient for the manufacture of these papers and that the art of making them is based on many years of experience and failures.—C. J. W.

Artificial Deckle-Edge. Papier-Ztg. 58, no. 97:1636-1637 (Dec. 6, 1933).—Different methods and appliances for producing an artificial deckle edge are briefly described.—C. J. W.

Hygroscopic Adhesive in the Paper Converting Industry. H. Nitz. Chem. Ztg. 57, no. 97:957-958 (Dec. 6, 1933).—The author discusses the warping of binder's board, which he considers is caused chiefly by the too dry atmosphere of modern manufacturing and storage rooms resulting from our present heating methods. He suggests the addition of high percentages of glycerin, sometimes as high as 100 per cent, to the adhesives used in book binding.—C. J. W.

Wood Fiber Plates (Insulating Wall Boards), Their Manufacture, Properties and Use. Ivar Lundback. Tek. Tid. Uppl. C, Kemie 62:73-80 (1933).—A new type of wall board, *Treetex*, is manufactured in Sweden; the method employed is similar to the insulite board method. Testing methods for the physical properties and water absorption are described. Experiments on fireproofing of Treetex have proved successful. Treetex is manufactured in different grades of hardness. Another product, *Startex*, consists of 1 board of Treetex between 2 boards of plywood. These plates having a hard outer shell and a porous insulating inner core have been successfully employed for doors.—C. J. W.

The Use of Latex in Coated Papers. W. H. Birchard. Paper Ind. 15:561-563 (Jan., 1934).—Commercial runs have shown the possibility of using latex in coated papers, resulting in the production of a paper of improved properties for the printer at no increase in cost.—A. P.-C.

Filled Surface Paper and Process for its Manufacture. The Champion Coated Paper Co. Fr. pat. 755,582 (May 13, 1933).—An uncoated paper suitable for use as a book paper contains mineral matter such as calcium carbonate and adhesive such as casein concentrated in the surface depressions, the amount of mineral matter being not greater than about 4.5 kilos per side per 1000 sp.m. of surface.—A. P.-C.

Bituminous Emulsions in the Manufacture of Paper and Boards. Henri Calmels. Papeterie 56:58-66 (Jan. 25, 1934).—A brief critical review of a few of the chief patents on the production of bituminized paper or board by the use of emulsions instead of by impregnation of the felted sheet.—A.P.-C.

Water Impermeable Paper. Société Kodak-Pathé. Fr. pat. 754,614 (April 21, 1933).—Paper is impregnated with a solution (preferably dilute) of a wax in a volatile solvent, and is then coated with a solution of nitrocellulose containing a relatively large proportion of a plastifier, with or without addition of resin.—A.P.-C.

Impregnated Paper Suitable for Use as an Artificial Leather. Frank H. McCormick and George L. Schwartz assignors to E. I. du Pont de Nemours and Co. U. S. pat. 1,913,283 (June 6, 1933).—Sheets which may be impregnated with a nitrocellulose composition are formed of felted artificially crinkled cellulose fibers having a freeness of 15 to 40 sec., and having the substantially circular form in cross section characterizing mercerized fibers.—A.P.-C.

Artificial Leather. Arthur C. Sewall assignor to Paper Patents Co. U. S. pat. 1,915,339 (June 27, 1933).—A pad of superposed gossamer-like felted creped tissue sheets of cellulose fiber (each sheet having a weight not substantially greater than 0.05 lb. per sp. yd.) is impregnated with rubber and compacted to produce a product resembling leather in appearance and various other properties.—A. P.-C.

Difficulties in the Gumming of Paper. Anon. Papier 36:1129-1130 (Dec. 32, 1933).—A brief discussion.—A.P.-C.

Concentration of Acid Waters from the Manufacture of Parchment Paper. Papeterie 55:1282-1289 (Dec. 25, 1933); 56:2-6 (Jan. 10, 1934).—A description of a simple and efficient installation for the concentration and purification of the sulphuric acid and washings from paper parchmentizing.—A.P.-C.

Moisture and Printing Papers. Anon. Papier 36: 1133-1137 (Dec., 1933).—A brief discussion of the influence of variations in atmospheric humidity on printing paper.—A.P.-C.

Method and Machine for Making Diagonally Corrugated Fiber Board. Arthur C. Schroeder assignor to Consolidated Paper Co. U. S. pat. 1,935,214 (Nov. 14, 1933).—The invention provides a mechanism, which can be used in conjunction with standard types of corrugating, glueing and other necessary machines, without material alteration therein, to convert longitudinally or transversely corrugated board into diagonally corrugated. The method consists essentially in cutting a single-face corrugated board diagonally into sections, turning them so that the cut edges extend in the direction of the longitudinal travel, and re-assembling them into a continuous sheet with diagonal corrugations by means of a second facing sheet on one side and by means of a projecting edge of the first facing sheet on the other side.—A.P.-C.

Machine for Forming Diagonally Corrugated Board. Edgar Watson assignor to The Lafayette Co. U. S. pat. 1,931,365 (Oct. 17, 1933).—The sheet to be corrugated is delivered on to the top of a traveling link belt having a diagonally corrugated surface, into the grooves of which it is pressed by a series of traveling rollers, constituted by a number of independent elements which travel from side to side of the belt during the movement of the latter.—A.P.-C.

Fiberboard and Process for Producing the Same. Jacob Edge assignor to Downington Mfg. Co. U. S. pats. 1,927,359, 1,927,360 and 1,927,361 (Sept. 19, 1933).—The invention is characterized chiefly by the fact that a pond

of stock is provided over the wire of a sufficient height to exert a relatively great static pressure. There is provided an auxiliary top wire, travelling on the top surface of the board being formed and holding it while it is being pressed. The wire passes through a series of small pressure rolls immediately after it leaves the pond, and beyond these are presses of the usual type. *No. 1,927,359* covers the product and method of making it; *No. 1,927,360* covers the machine; *No. 1,927,361* provides means for making one or both surfaces of the sheet of a different furnish from the main body of the sheet, but in such a way that the surfaces are formed as an integral part of the sheet and not as separate plies.—A.P.-C.

Apparatus for and Method of Making Fiber Board. Edward T. Street. U. S. pat. 1,927,378 (Sept. 19, 1933).—The invention provides various improvements in the construction of the machine covered by U. S. pat. 1,927,360, the principal features being: (1) use of a suction box above the auxiliary wire at a point just before the pulp layer emerges from the pulp stock chamber over the wire; (2) means for preventing excessive deposition of fiber on or near the edges of the wire, and for reducing wear along the edges of the wire.—A.P.-C.

Process of Making Boards and Apparatus Therefor. William A. Darrah. U. S. pat. 1,907,046 (May 2, 1933).—A wet sheet is formed on an endless wire passing around a suction cylinder mold mounted in a stock vat. The wet sheet is acted upon by a rotating "throwing" member, consisting of a series of blades mounted on a rapidly rotating shaft, which breaks up the wet sheet into lumps and throws them violently on a traveling belt (wire or felt); and the reformed sheet is pressed and dried.—A.P.-C.

Building Product and Method of Making the Same. Thomas Robinson assignor to Lancaster Asphalt, Inc. U. S. pat. 1,922,501 (Aug. 15, 1933).—A multiple-ply sheet (consisting preferably of an odd number of plies) is formed by feeding suitable furnishes between succeeding three-roll stacks. The composition of the various plies varies from one with low fiber content and high plastic and filler contents in the outer plies. The built-up sheet is led to content in the center to relatively high fiber and low plastic rotary molding devices to form it into single shingles or shingle-strips of tapering thickness.—A.P.-C.

Apparatus for Coloring Asbestos Shingles. Charles P. Haff assignor to Ambler Asbestos Shingle and Sheathing Co. U. S. pat. 1,930,749 (Oct. 17, 1933).—The invention provides a three-section unit for projecting powdered coloring material on to the under side of the moist felt just before it reaches the pick-up roll, so as to color the outside of the shingles. The unit consists of a hopper with an impelling device to throw the color upwards against the felt, an intermediate charging box which may be divided into several compartments for different-colored material, and piston chamber in which are a series of pistons for forcing the coloring material from the charging box into the hopper.—A. P.-C.

Producing Thick Butt Shingles with Sealed Edges. Clarence R. Eckert assignor to The Barrett Co. U. S. pat. 1,927,824 (Sept. 26, 1933).—Roofing felt is saturated with asphalt, dried, coated with asphalt on both sides, surfaced with granular material on one side and with mica dust on the other. The sheet is then slit longitudinally, and the strips thus formed are separated by passing alternate strips about guides so that they travel in the same longitudinal direction as the portions of the web from which they are cut but in a different horizontal plane from the plane of movement of the remaining strips. They are then subjected to a final coating operation to seal the edges exposed by the slitting.—A.P.-C.

Fibrous Product and Method of Making the Same. Thomas Robinson assignor to Lancaster Processs, Inc. U. S. pat. 1,927,047 (Sept. 19, 1933).—Shingles, or the like, are formed from waste paper stock and asphalt emulsion, the emulsion being preferably produced continuously at the same time and in the same apparatus as is used for defibering the waste paper. The furnish is sheeted on a wire passing around a large roll, rotating partly immersed in the stock vat and within which a high vacuum is maintained. By using suitable blanks or masks over the wire, individual shingles may be formed instead of a web. The material is dried and processed in the usual way.—A.P.-C.

Method of Mottling Paper. Nils F. Becker assignor to Rhinelander Paper Co. U. S. pat. 1,921,649 (Aug. 8, 1933).—Parchment paper having a "leopard's skin" effect is obtained by allowing water to fall in drops on the surface of partially dried parchmentized paper, as it passes over the suction boxes.—A.P.-C.

Laminated Molded Product. Roy H. Kienle and William J. Scheiber assignors to General Electric Co. U. S. pat. 1,921,757 (Aug. 8, 1933).—An artificial resin is incorporated into wet paper pulp, the letter is sheeted, *e.g.*, on a multiple-cylinder paper machine, and the product is dried and molded under the action of pressure and heat.—A.P.-C.

The Manufacture of Transparent Packing Materials from Acetyl Cellulose, Likewise Colored and Bronze Foil. George Kuster. Wochbl. Papierfabr. 64, no. 48: 856-60 (Dec. 2, 1933).—A non-technical discussion of the manufacture and uses of transparent packing materials.—J.F.O.

Concerning the Change in Ultra Violet Absorption of Parchment Paper in Sunlight. H. Sommer & J. Becker. Papierfabr. 31, No. 23:329-31 (June 4, 1933).—By means of the Pulfrich photometer it is shown that parchment paper which has been specially treated absorbs the ultra-violet rays which are supposed to be injurious to foodstuffs packed in such transparent untreated papers.—J.F.O.

Process for the Manufacture of Impervious Materials of Pulp, Paper Stock and Similar Materials. F. N. Burt Co., Ltd., Toronto. Swed. pat. 78,083 (March 9, 1927).—The material is subjected to molten sulphur in the presence of diphenyl.—J.F.O.

Process for the Manufacture of Insulation Board of Peat for Building Purposes. H. D. Hallenberg, Viborg. Finn. pat. 15,215 (April 12, 1932).—The peat, which is finely divided, is mixed with pulp shives, then pressed, dried and made into boards. Paper broke, sawdust and similar fillers can be added.—J.F.O.

Process and Device for the Manufacture of a Grease Proof and Water Proof Paper. Papeteries Navarre Societe Anonyme, Lyons, France. Ger. pat. 587,012 (Oct. 6, 1931).—A moving web of paper is drenched on both sides with a cellulose derivative, especially viscose, and after the removal of the excess of the drenching liquid, the web of paper is led through a coagulation and precipitation bath. The coagulation bath is made up from the same salt as that formed during the process from the decomposition liquid added counter current to the cellulose derivative. The counter current treatment is so regulated that the bath is weak but distinctly acid in the decomposition stage and for the coagulation stage is gradually becomes neutral.—J.F.O.

Device on Machine for the Manufacture of Corrugated Asbestos Cement Plates. Scheerders-Van Kerchove Vereenigde Fabrieken, St. Nicolas Waes, Belgium. Swed. pat. 77,982 (April 22, 1930).—J.F.O.

Leather Board from Leather Waste. Fr. Hoyer. Wochbl. Papierfabr. 64, No. 27:472-73 (July 8, 1933).—

The author describes the process in full from the selection of the waste leather, sole leather scraps being the most desirable, to the most suitable type of machine and method of drying.—J.F.O.

Leather Board and Corrugated Board As a Sound Damper. Wochbl. Papierfabr. 64, No. 30:531 (July 29, 1933).—A description of the use of leather board and corrugated board for the dampening of sound.—J.F.O.

Concerning the Change in the Absorption of Ultra Violet in Parchment Paper in Sun Light. H. Sommer and J. Becker. Wochbl. Papierfabr. 64, No. 28:494-96 (July 15, 1933).—From a series of experiments the authors have found that parchment paper used for wrapping certain materials and foodstuffs which spoils through the action of light can be treated so that the ultra-violet light rays are absorbed with the result that materials wapped in parchment so treated will not spoil. By means of much data and curves, this phenomenon is further elucidated.—J.F.O.

Water-Proof Papers. A. Foulon. Wochbl. Papierfabr. 64, No. 29:513-515 (July 22, 1933).—In the usual methods of impregnating paper with molten bituminous materials, difficulty has been experienced in getting the water-proofing material to penetrate thoroughly unless high temperatures are used with the resulting loss in the strength properties of the paper and the possibility of carbonization. The author describes several of the latest methods for the water-proofing of paper.—J.F.O.

Paper and Printing Ink. Julius Bekk. Wochbl. Papierfabr. 64, No. 40:703-06 (Oct. 7, 1933).—The author first discusses the various properties of paper and inks which have an effect in printing. The absorptive capacity of paper for various inks is studied and a method for testing this is described. The apparatus for testing the absorptive capacity of paper consists of two small cylinders for unwinding and winding the sample of paper which is drawn through the ink by means of the above cylinders and then the excess ink is removed. The sample of paper is weighed before and after the ink has been absorbed. Even though the top side of the paper is, as a rule, smoother and less absorptive than the wire side, to obtain the same degree of black with the same color, less color is used for the wire side.—J.F.O.

Hydroloid paper. Wochbl Papierfabr. 64, No. 41: 720-21 (Oct. 14, 1933).—Description of the process for making and the properties of hydroloid paper. This paper possesses a very high wet strength, is water-proof and grease-proof, and shows a very high resistance to the passage of air. Much data and tables are added to show comparative strength tests with raw paper and hydroloid paper—J.F.O.

The Use of Linseed Oil and Coconut Oil in the Manufacture of High Grade Printing Papers. Wochbl. Papierfabr. 64, No. 45:792 (Nov. 11, 1933).—By the use of linseed oil and coconut oil an exceptionally high finish can be obtained on a paper and at the same time the sheet is soft and has a high degree of absorbency. Directions for the preparation of this sizing material and its application are given.—J.F.O.

Concerning the Influence of the Fine Material in Ground Wood on the Strength Properties of Unloaded Papers Made from Wood. E. Meister and G. Foeth. Wochbl. Papierfabr. 64, No. 49:885-86; No. 51:921-22 (Dec. 9, 23, 1933).—The author first discusses results of other investigators on this subject, then the methods of his work; the results are given in tables and three dimensional graphs. A comprehensive bibliography accompanies the article. In conclusion the author states, that, in so far as the mechanical strength of wood fiber papers is concerned, the finer portion of the ground wood is the more valuable constituent. This is ascribed to the cementing properties which are more noticeable the less beaten the chemical pulp used as the base.—J.F.O.

Machinery

Modern Cross Cutters. Anon. Finnish Paper and Timber J. 15, No. 21:790-791 (Nov. 15, 1933).—Special features of cross cutters built by the C. G. Haubold A.G., Chemnitz, Germany, are described.—C.J.W.

Feeding Equipment for Band Saws. A. Hollmen. Finnish Paper and Timber J. 15, no. 17:644 (Sept. 15, 1933).—Description of a new feeding device which results in a 40 per cent increase in efficiency of band saws.—C.J.W.

Ball and Roller Bearings for the Paper Machine of the A/S Svelvik Paper Mill. Papier-J. 21, No. 22:35-237 Dec. 14, 1933).—In order to increase the speed of a paper machine, a Norwegian paper mill was confronted with the following problem: to install either a new and more powerful steam engine or to replace a large number of anti-friction bearings in the paper machine by ball bearings. The second alternative was adopted and the results proved entirely satisfactory.—C.J.W.

Automatic Quantity Regulation for Paper and Pulp Machines. G. L'Orange. Papier-J. 21, No. 22:219-223 (Dec. 14, 1933).—A theoretical discussion for proving that our present knowledge of friction phenomena in pipes can be used for constructing an automatic quantity regulator supplying not a constant volume, but a constant weight of fibers per volume and time unit, independent of variations in consistency. Although the author does not claim that his ideas can be applied directly to practice, he hopes to have shown the lines along which successful improvements in regulation can be obtained.—C.J.W.

Device for the Barking of Logs in Drums. K. G. Hellner, Vaplan. Swed. pat. 76,719 (April 25, 1931).—Arrangement for the feeding of the logs into a barking drum partially submerged in water.—J.F.O.

Barking Drum. Otto Andresen, Oslo. Finn. pat. 15,239 (Nov. 4, 1930).—J.F.O.

Device for Drum Barkers for Long Logs or Wood Cut in Long Lengths. A. G. Johansson, Nalden. Swed. pat. 78,268 (Dec. 14, 1929).—J.F.O.

Use of Steam in the Barking of Wood. H. Korpi. Finnish Paper and Timber J. 15, no. 18:684-686-688 (Sept. 30, 1933).—The article describes a new barking method according to Finnish patent 14,617. The logs are exposed to steam pressure in drums for a short period; the pressure is then suddenly released, causing the bark to separate from the wood, thereupon it can be easily removed. Calculations for steam consumption, size of drum, etc., are included.—C.J.W.

A New Method for the Barking of Wood. Wochbl. Papierfabr. 64, No. 47:828 (Nov. 25, 1933).—This method invented by H. Korpi in Finland consists in subjecting the unbarked logs to a sudden increase in pressure for a period of about 5 to 10 minutes after which the bark is easily removed by hand or by means of a spray of water. The logs are placed in a drum into which steam is introduced at several places.—J.F.O.

The Voith Pneumatic Stock Conveyor. Christopher C. Crusius. Paper Trade J. 98, No. 6:47-48 (Feb. 8, 1934).—A brief description of the system, and indication of its merits.—A.P.-C.

Pulp Shredder. Auguste Avot. Fr. pat. 752,358 (March 4, 1933).—Pulp in sheets is shredded before feeding to pulpers by passing between a pair of horizontal shafts on each of which is keyed a series of toothed disks, the two sets being staggered relatively to each other.—A.P.-C.

Automatic Regulator for Paper Machines. Société Française des Régulateurs Arca. Fr. pat. 753,634 (July

26, 1932.—A regulator, which may be of known type, is placed under the dependence of two or more factors (steam pressure in the driers, tension of the sheet, etc.) and is made to act on one of several factors, or on more than one simultaneously (admission of steam to the driers, stock fed to the wire, speed of the machine, etc.)—A.P.-C.

Causes of the Sticking of the Sheet to the Presses and Methods of Preventing It. D.C.M.I.P. Papeterie 55: 1062-1066 (Oct. 25, 1933).—A brief general discussion. Two principal methods are indicated for preventing this defect: (1) beat the stock as wet as is consistent with the nature of the paper required; (2) use a small auxiliary felt or rubber belt passing around the top first-press roll and around a small roll parallel to and slightly above the press.—A.P.-C.

Automatic Mechanical Control and Direct Water System. Melvin R. Ware. Paper Trade J. 97, No. 26: 18, 21 (Dec. 28, 1933).—A brief description is given of a system for complete automatic operation and control of a paper mill, starting with the feeding of the breaker beaters, which is in successful operation on a machine making rag roofing stock. Complete re-use of white water is effected.—A.P.-C.

Design of Paper Making Machines Forty Years Ago and Now. Designer. Paper Ind. 15:503-505 (Dec., 1933).—A brief retrospect of the design of paper machines at the end of the 19th Century as compared with modern machines.—A.P.-C.

Consistency Regulator and Freeness Recorder. E. J. Trimbey. Pulp Papier Can. 35: 12-13 (Jan., 1934).—A brief description of the Trimbey-Witham, Jr., consistency regulator and freeness recorder and discussion of its usefulness.—A.P.-C.

Factors Affecting Fourdrinier Wire Life. Harry G. Specht. Paper Ind. 15: 627-629 (Feb., 1934).—A discussion of wire life variables, with suggestions for increasing wire life.—A.P.-C.

Modern Winder Drives Improve Operation and Reduce Roll Costs. N. L. Danforth and R. R. Stolz. Paper Ind. 15: 638-639 (Feb., 1934).—A brief description of the operation and advantages of the Westinghouse d.c. variable voltage electric drive with regenerative braking and automatic tension control.—A.P.-C.

Note on Sectional Electrical Paper Machine Drives. Louis Barbillion. Ind. Papetiere 12: 297, 299 (Oct., 1933).—The Brown Boveri sectional electrical paper machine drive is based on the use of the "electric differential," the principle of which is extremely general and is very widely used in the electrical industry.—A.P.-C.

Auxiliary Drive for Cylinder Type Board Machine. A. Suter and D. R. Shoults. Paper Trade J. 98, No. 3: 35-37 (Jan. 18, 1934).—A description of layout and operation of auxiliary motor drive for the cylinder molds and primary suction rolls on the recently remodeled No. 1 board machine at the Bogalusa, La., mill of the Bogalusa Paper Co.—A.P.-C.

Modern Board Machines. Karl Zeitsch. Mon. Papeterie Belge 13: 747-751 (Dec., 1933).—A description of a machine installed in 1931 by the Füllnerwerk company in a Finnish mill, comprising a combination of two superposed fourdrinier parts and a number of cylinders, for the manufacture of high grade multiplex cardboard. —A.P.-C.

Method of and Apparatus for Thawing Pulpwood Prior to Drum Barking. Peter A. Paulson. U. S. pat. 1,932,250 (Oct. 24, 1933).—The wood is conveyed at a slow rate of travel from end to end of a building, and during its travel is thoroughly drenched with plentiful sprays of hot water, the conditions being regulated so that by the time the wood emerges from the building, the frozen bark has been thoroughly thawed and softened.—A.P.-C.

Thrust Bearings for Chippers. Thomas B. Sumner. U. S. pat. 1,432,166 (Oct. 24, 1933).—In order to avoid damage to the knives when hard material (e.g., pieces of metal or exceptionally hard knots) falls between the knives, the thrust bearing of the shaft is constructed so that it will readily break under excessive lateral thrust, thus permitting the chipper disk to immediately recede and allow the hard object to pass.—A.P.-C.

Device for Distributing Wood Chips in Pulp Digesters. Walter H. Swanson assignor Paper Patents Co. U. S. pat. 1,936,341 (Nov. 21, 1933).—The chips are fed through a spout rotating at about 20 r.p.m. and provided with inwardly and downwardly directed baffles, from which it emerges in a sheet. The latter passes through the digester nozzle into the path of a flail-type beater rotating at about 700 r.p.m., which distributes the chips uniformly over the whole cross section of the digester and makes them lie substantially flat.—A. P.-C.

Multiple Stage Pulp Washer. Charles L. Wagner assignor to J. O. Ross Engineering Corp. U. S. pat. 1,933,609 (Nov. 7, 1933).—The invention provides a long sloping container having inclined conveyor troughs fitted with screens, suction boxes and liquor discharges with helical conveyors in flight sections. Each section of the helical conveyor diminishes in diameter and lead, or pitch. Pumps or ejectors raise the weakest washing liquid to the next preceding stronger stage. The suction on all boxes is maintained at a small vacuum.—A.P.-C.

Method of and Means for Separating Pulp from Water. Walter Claus and Erwin Schmidt assignors to Zellstofffabrik Waldhof. U. S. pat. 1,924,483 (Aug. 28, 1933).—Pulp is washed by introducing at a fairly high density into a long trough, the bottom and (or) sides of which are made of porous diaphragm plates. Washing liquid (or a liquid or gaseous reagent) is introduced into the trough through the diaphragm plates near the stock inlet, and the water is separated as the stock passes over the porous plates.—A.P.-C.

Rubbish Separator for Stock for Paper Mills. Charles W. Unkle and Harry C. McNaghten. U. S. pat. 1,935,461 (Nov. 14, 1933).—The separator is placed between the braker beater stock chest and the jordan. It consists essentially of a long inclined trough, provided at intervals with baffles extending across the full width of the trough. Each baffle carries upwardly projecting rake teeth, the number increasing progressively from top to bottom.—A.P.-C.

Paper Pulp Extractor. Lemuel V. Reese and George W. Johnson assignors to The American Laundry Machinery Co. U. S. pat. 1,931,508 (Oct. 24, 1933).—In centrifugal extractors, a vertically extending annular skimmer ring is provided at the upper rim of the basket and is spaced a sufficient distance from the innermost edges of the overhanging portion to skim off or separate the lighter impurities from the pulp.—A.P.-C.

Method and Apparatus for the Removal of Mechanical Impurities from Pulp. Aleksander Lampén. U. S. pat. 1,926,546 (Sept. 12, 1933).—Impurities such as pitch particles, etc., are removed by projecting the stock over a screen surface in such a manner as to prevent formation of a layer of fiber on the screen. The method is carried out in a vertical cylindrical stationary screen in which is mounted a rapidly rotating set of wings to throw the stock against the screen. Openings are provided at suitable intervals in the screen to conduct the stock away.—A.P.-C.

Method of and Machine for Screening Pulp. Anton J. Haug. U. S. pat. 1,932,663 (Oct. 31, 1933).—In the screens covered by U. S. Pats. 1,533,410, of April 14, 1925,

and 1,551,953, of Sept. 1, 1925, the scrapers provided to prevent accumulation of the tailings on the inside of the screen cannot be set in actual contact with the screen, so that a thin layer of screenings remains on the surface of the screen and reduces the capacity and efficiency of the machine. According to the present invention these accumulations of screenings are dislodged by creating reverse pulsations or impulses in the liquid adjacent the screen.—A.P.-C.

Broke Pulper. Carl G. Muench assignor to The Celotex Co. U. S. pat. 1,928,601 (Sept. 26, 1933).—The broke and water are fed into a horizontal tank having a polygonal cross section, or having a basically circular cross section with inwardly extending projections. On a rotating shaft extending along the axis of the tank are mounted a series of agitator or beater arms placed in staggered relation throughout the length of the shaft, so as to gradually work the material towards one end where the tank is enlarged into a chamber provided with a horizontal cylindral screen. Scraper arms rotate in close contact with the screen to force through the fibers that have been sufficiently disintegrated. The level of the material is regulated by means of an adjustable dam or weir.—A.P.-C.

Method and Apparatus for Handling Slush Stock. William E. Beach. U. S. pat. 1,919,289 (July 25, 1933).—In pumping slush stock from a chest to a beater, a motor-operated valve is provided in the line just above the stock pump. The pump motor is operated by remote control through a series of connections which open the valve before the motor starts up and which closes the valve when the motor is stopped so as to hold a certain amount of stock in the line between the pump and the beater.—A.P.-C.

Means and Method for Indicating Weight and Moisture Variations in Paper Machines and the Like. Arthur E. Broughton. U. S. pat. 1,936,225 (Nov. 21, 1933).—A thermostatic controlling element is placed in contact with the sheet near the wet end of the drier section at a point corresponding to abrupt rise in the temperature curve of the sheet. The heat input into the driers between the presses and the thermostatic cell is kept constant, and the thermostatic element controls the heat input into the remaining driers and (or) the consistency of the stock fed to the paper machine so as to maintain the weight and moisture content of the finished paper constant.—A. P.-C.

Controlling the Consistency of Stock to the Paper Machine. Darcy E. Lewellen and Emmons F. Lewellen. U. S. pat. 1,933,814 (Nov. 7, 1933).—The adjustment of the jordan plug and of the feed of stock from the stock box to the flow box are controlled by means of a vacuum gage connected to the paper machine suction box or suction couch roll, so that the setting of the plug and amount of stock are automatically adjusted to maintain a constant vacuum under the wire.—A.P.-C.

Doctor Blade for Paper Machine Rolls. Oliver P. Arnold assignor to W. E. Greene Corp. U. S. pat. 1,933,837 (Nov. 7, 1933).—Material having abrasive properties is incorporated into the blade, so as to effect a scouring action which effectively prevents any glazing of the roll surface.—A.P.-C.

Consistency Regulator. George F. French assignor to Riegel Paper Corp. U. S. pat. 1,925,833 ,Sept. 5, 1933).—The stock is fed under a constant head to a chamber provided at the bottom with an outlet spout of restricted capacity. At the bottom of the chamber is a diaphragm box. The height of the stock in the chamber varies according to the consistency and correspondingly affects the pressure in the diaphragm box. The latter is connected to control the valve in the dilution-water line, so as to reduce or increase the amount of water when the consistency falls below or rises above the desired value.—A.P.-C.

Paper Machine Reel. Harold B. Henson and Erik R. Johnson. U. S. pat 1,923,670 (Aug. 22, 1933).—An auxiliary reel is provided, supported on quadrant brackets placed on opposite sides of the winding drum and pivotally mounted on the pedestals of the winding-drum bearings. When the roll on the main reel has been wound to the desired size, the web is severed (as by an air blast) and directed on to the auxiliary reel on which it begins to wind. After removal of the completed roll, the new roll is transferred to the main reel.—A.P.-C.

Paper Machine and Process of Making Paper. George A. Engert and George B. Gibson assignors to Sonbert Machine Co. U. S. pat. 1,924,154 (Aug. 29, 1933).—The invention provides a novel wet end for a paper machine of the fourdrinier type, the paper fibers being deposited on a traveling wire which is entrained around a suction cylinder partly immersed in a vat of stock. It is claimed that in this way a well formed sheet can be produced at high speed, which can be passed directly to the driers after very light pressing. The machine is claimed to combine the advantages of the cylinder and fourdrinier types of machine, and to eliminate the disadvantages of both types.—A.P.-C.

Paper Making Machinery. James K. Darby assignor to William H. Millspaugh. U. S. pat. 1,931,062 (Oct. 17, 1933).—The invention covers the combination of displacement diagonally forwards of the fourdrinier table (including the breast roll but exclusive of the couch) into the aisle and towards the couch roll, together with the use of "pad rails." The latter consists of relatively rigid, light and thin rails which are laid on top of the main rails extending into the aisle, after the new wire has been strung out over the main rails in the aisle. The table is thus rolled out over the new wire, while the latter is held between the main rails and the "pad rails."—A.P.-C.

Mechanism for Watermarking Paper. Howard Brown assignor to Southworth Co. U. S. pat. 1,933,006 (Oct. 31, 1933).—The watermarking roll is mounted in such a way that it can be adjusted into exact parallel relation with the associated bottom roll, that both ends of the watermarking roll can be adjusted simultaneously towards or away from the bottom roll, and so that the watermarking roll can be adjusted axially. All adjustments are made from the front side of the machine.—A.P.-C.

Yielding Supporting Means for Suction Boxes. John W. Vedder. U. S. pat. 1,908,579 (May 9, 1933).—In the mounting of leaf springs used for carrying fourdrinier wire or suction-box supports, an elastic or resilient medium (such as sheets of rubber) is interposed between the ends of the leaf springs and rigid parts to which the springs are clamped. This considerably reduces the acute bendings of the springs, and consequently the fatigue of the metal.—A.P.-C.

Press for Paper Machines Including Screen Faced Roll. Carl H. R. Johnson assignor to Downington Manufacturing Co. U. S. pat. 1,934,543 (Nov. 7, 1933).—In order to clean the surface of screen-faced rolls of adhering fibers, a felt roll is pressed against it, and the fibers are removed from the latter by means of a doctor blade.—A.P.-C.

Primary Press Section for Paper Machines. Albert H. Standley, Jacob Edge and Edward T. Street, assignors to Downington Manufacturing Co. U. S. pat. 1,925,972 (Sept. 5, 1933).—In a cylinder machine, all the top rolls of the primary presses are mounted on a common rail and all the bottom rolls on a second rail. The two rails can be adjusted relatively to each other, and means are also provided to adjust each press individually. The rails and

rolls are mounted so as to facilitate and simplify the changing of felts.—A.P.-C.

Paper Winder. John H. A. Kruimel. U. S. pat. 1,919,518 (July 25, 1933).—The mandrel on which the paper is wound is carried by bearings which are open at their upper halves and which are supported on a slidable frame. As the roll builds up, the frame moves towards a pair of inclined, pivoted levers, provided with half-bearings into which the mandrel ultimately moves. The frame automatically slides back to its original position, ready to receive another mandrel as soon as the roll has been wound to its full size.—A.P.-C.

Paper-Treating Rolls. John J. Case assignor to John Waldron Corp. U. S. pat. 1,925,949 (Sept. 5, 1933).—The bottom roll is journalled in bearings mounted, either directly or through levers, on expansible hydraulic elements, which are constructed so that no packings are required to prevent leakage, even under the heaviest working pressure.—A.P.-C.

Calender Doctor Assembly. Andrew N. Russell assignor to Dominion Engineering Works, Ltd. U. S. pat. 1,935,164 (Nov. 14, 1933).—The invention provides for a very thin flexible doctor blade mounted so as to have a very high coefficient of local flexure. The method of mounting the blades permits of withdrawing them to leave a clearance of about 4 inches from the roll surfaces, motion being preferably rectilinear and in a horizontal plane and the blades being at all times maintained parallel to the roll surfaces. Provision is made for adjusting the doctors as a group or individually.—A.P.-C.

Paper Calender Pressure Regulator. Bernard A. Malkin assignor to Dominion Engineering Works, Ltd. U. S. pat. 1,934,233 (Nov. 7, 1933).—The calender is equipped with fluid pressure (or spring) cushioning or weight relieving devices to exert upward pressure on the journal bearings of one or more selected rolls in the stack to regulate the nip pressure at desired points and to prevent it from exceeding a predetermined maximum value.—A.P.-C.

Method of and Means for Splicing. James A. Cameron assignor to Cameron Machine Co. U. S. pat. 1,931,953 (Oct. 24, 1933).—The invention provides a table at a suitable point of the winder, on which the two ends to be joined are trimmed and spliced by means of an adhesive tape which is applied by means of heating and pressing elements mounted on a carriage which travels along the splice. Clamping members are provided to hold the ends in position on the table. By proper adjustment of the trimming members either a butt-splice or an overlapping splice can be made, and in the latter case the tape may either straddle the splice or be interposed between the two ends.—A.P.-C.

Synchronized Motor Drive for Supercalenders and Winders. Chester W. Drake assignor to Westinghouse Electric and Manufacturing Co. U. S. pat. 1,925,866 (Sept. 5, 1933).—The invention provides an electrical control system whereby: the paper is maintained under constant tension as it passes from one point to another, regardless of changes in the speed of the machine; the tension of the paper is selectively controlled; any predetermined proportional difference in speed between two motors is automatically maintained for all speeds of the motor.—A.P.-C.

Paper Machine Drive. Carroll Stansbury and Glendon C. Brown assignors to Cutler-Hammer, Inc. U. S. pat. 1,926,822 (Sept. 12, 1933).—The invention provides a speed regulator that accurately maintains a constant speed ratio between the several motors, that is free from electrical or mechanical inertia effects tending to cause hunting, and that requires a minimum of power. It is characterized, among other features, by the inclusion of an electron tube in the circuit of the field winding of each of direct-current sectional motors.—A.P.-C.

Paper Handling Apparatus. Harry A. Crisp assignor to The Appleton Coated Paper Co. U. S. pat. 1,934,913 (Nov. 14, 1933).—The machine comprises winding means and means for automatically feeding spindles successively to the winding mechanism and for automatically applying glue to the spindles as they pass to the winding mechanism. It also provides mechanism to operate a cutter to sever the sheet when a given length has been wound and for ejecting the finished roll of paper.—A.P.-C.

Method of Producing Narrow Paper Rolls. William H. Kniep assignor to The Graham Paper Co. U. S. pat. 1,926,340 (Sept. 12, 1933).—In order to facilitate the utilization of narrow rolls of paper, such as are used in adding machines, etc., the outer lap is glued and applied to the roll, and a rip-cord with projecting ends is embedded under the outer lap.—A.P.-C.

Paper Reeling Machine. Frederick W. Vickery. U. S. pat. 1,930,405 (Oct. 10, 1933).—The invention relates to reel frames for assembling several webs of paper to be forwarded together, *e.g.*, to a cutting machine, of which the reel frame may form part. In a reel frame having a single tier of reels, the replacement of an intermediate reel presents no special difficulty. To permit the replacement of an exhausted end reel, the invention provides for an intermediate reel being brought to the end position while its web is still unwinding, and for a new reel to be placed in the position thus vacated. Where the reel frame has two tiers of reels, the invention provides for independent replacement of any one of the reels of the lower tier while the rest are running by making their bearing movable, so that a new reel can be introduced from below.—A.P.-C.

Sheet Press. Henri P. L. Laussucq assignor to Birdsboro Steel Foundry and Machine Co. U. S. pats. 1,907,204, 1,907,205 and 1,907,207 (May 2, 1933).—These three patents cover numerous mechanical features in the construction of hydraulic presses used for forming and pressing boards, designed to facilitate the filling of the die and render the cycle of operations automatic.—A.P.-C.

Concerning the Regulation of the Consistency. K. Steinbach. Wochbl Papierfabr. 64, No. 36; 636-38 (Sept. 9, 1933).—The author first briefly describes consistency regulation, mentioning the different types of regulators and how they are actuated, the Trimbey, Arca, Meyer-Mesco and finally the Haspa which is discussed in detail. Curves and other data are included showing the operation and results from the use of the Haspa consistency regulator.—J.F.O.

A New Rewinder. Wochbl. Papierfabr. 64, No. 48: 860-62 (Dec. 2, 1933).—Description of a winder manufactured by Goebel A.G. which can operate noiselessly at speeds up to 600 meters.—J.F.O.

Claims and Causes for the Wear of Paper Machine Wires, Wire Seam Construction. Oskar Sturner. Papierfabr. 31, No. 22: 317-321; No. 23: 331-36 (May 28, June 4, 1933).—The factors affecting wire life are discussed. A curve is plotted showing the tension on the wire as it leaves the breast roll, at the table rolls, at the couch, the guide rolls and finally at the breast roll and in conjunction the speed of each of these rolls were compared with the speed of the wire. It was shown how the addition of more vacuum at the suction boxes required a proportionately greater amount of power. The strength of wires of various meshes, the effect of white water and certain chemicals, and, in conclusion the construction of wire

seams was described by means of several illustrations.—J.F.O.

Band and Screen Guide Regulator. Gottlieb Stohrer, Grossgarach. Ger. pat. 577,196 (Jan. 23, 1931).—Addition to Ger. pat. 575,414.—J.F.O.

Band and Screen Guide Regulator. Gottlieb Stohrer, Grossgarach. Ger. pat. 577,197 (Nov. 20, 1931).—Addition to Ger. pat. 575,414.—J.F.O.

Safety Valve for Cooking Containers, Especially Pulp Digesters. Kubler & Niethammer, Kriebstein. Ger. pat. 577,395 (March 8, 1932).—J.F.O.

Arrangement for the Manufacture of Corrugated Board of Several Sheets. Jacob Moll, Lucka. Ger. pat. 578,439 (Nov. 12, 1931).—J.F.O.

De-watering Screen Cylinder. A. Bol. Karlstads Mekanska Verkstad, Karlstad. Swed. pat. 76,779 (Jan. 18, 1932).—J.F.O.

Process for the Evaporation of Liquids. Industriekemiska A.Bol., Stockholm. Swed. pat. 76,860 (May 22, 1930).—The invention concerns the evaporation by direct heat interchange and with the counter current flow principle.—J.F.O.

Process for the Heat Carrying, Saturation, Washing, Thickening and Similar Operations of Liquids. Industriekemiska. A. Bol., Stockholm. Nor. pat. 52,214 (Nov. 14, 1928).—Air or gas is compressed into the liquid thus making it foam.—J.F.O.

Conveyor Device for Ground Wood and Similar Substances. Firma J. M. Voith, Heidenheim. Ger. pat. 576,618 (Aug. 16, 1927).—The invention concerns itself with a conveyor device, which takes the stock mixed with bleach liquor and by means of compressed air forces it through a pipe line. It is arranged so that a fixed amount of bleach liquor is continuously added, and so that the stock is well mixed with the bleach liquor.—J.F.O.

Chest for Fiberous Materials for the Manufacture of Paper and Board. Linke Hofmann Busch Werke Akt. Ges., Bad Warmbrunn. Ger. pat. 577,297 (Oct. 23,1931). Addition to Ger. pat. 557,097.—J.F.O.

Arrangement for Putting Designs on Webs of Paper. I. G. Farbenindustrie Akt. Ges., Frankfurt a.M. Ger. pat. 576,753. (Oct. 23, 1930).—An endless band of fabric is so arranged that it passes through a bath containing a solution or suspension of a color, chemical or some other desired substance, after which the band passes over a roll which is perforated or having slits through which compressed air is blown, thus bringing the substance onto the paper which is conveyed past the compressed air stream.—J.F.O.

Press Roll for the Pressing Out of Liquids from Pulp Bands. Maschinenfabrik Imperial Gm.b.H., Heisen. Ger. pat. 576,889 (Oct. 23, 1930).—Addition to Ger. pat. 560,422.—J.F.O.

Arrangement on Webs of Stock to Stretch It Out Crosswise and to Maintain This Width. Papierfabrik Scheufelen, Oberlenningen. Ger. pat. 577,397 (Dec. 8, 1931).—The arrangement consists of two rolls of equal diameters which are connected at one end, the two rolls forming an inverted "V" considerably flattened at one end.—J.F.O.

Machine for Cutting Both Across and Width. Maschinenbau Werkstatte Niefern G.m.b.H., Baden. Ger. pat. 577,398 (Sept. 9, 1930).—J.F.O.

Regulating Device for the Drive of Winders with Direct Current Shunt Motors. Allgemeine Elektricitats Gesellschaft, Berlin. Ger. pat. 576,605 (June 18, 1930).—The inventions is characterized by having the speed of the motor automatically regulated in relation to the current through its armature.—J.F.O.

Regulating Device for the Electric Drive of Winders. Allgemeine Elektricitats Gesellschaft, Berlin. Ger. pat. 576,866. (Nov. 23, 1930).—J.F.O.

Arrangement for Regulating the Load of Wood Grinders. Allgemeine Elektricitats Gesellschaft, Berlin. Ger. pat. 576,867 (Jan. 29, 1931).—J.F.O.

Electric Drive for Paper Machines. Allgemeine Elektricitats Gesellschaft, Berlin. Ger. pat. 574,430 (May 11, 1927).—J.F.O.

Regulating Device for the Individual Motors of a Multiple Motor Drive, Especially for Paper Machines. Siemens Schuckertwerke Akt. Ges., Berlin. Ger. pat. 576,-031 (May 29, 1930).—The regulating device has the assistance of an auxiliary machine which changes the voltage to the armatures of the individual motors.—J.F.O.

Regulating Device for Electrical Multiple Motor Drive, Especially for Paper Machines. Siemens Schuckertwerke Akt. Ges., Berlin. Ger. pat. 578,466 (June 9, 1926).—J.F.O.

Starting Device for Electrical Multiple Motor Drive with Parallel Regulation. Allgemeine Elektricitats Gesellschaft, Berlin. Ger. pat. 576,865 (March 8, 1931).—J.F.O.

Multiple Roll Calender with Lever Loading Device. Eck & Sohne, G.m.b.H., Dusseldorf. Ger. pat. 576,956 (July 24, 1931).—J.F.O.

Device for the De-Watering of Paper, Ground Wood or Pulp on a Fourdrinier Machine with a Doctor Placed Under the Wire. Firma J. M. Voith, Heidenheim. Ger. pat. 577,195 (Jan. 31, 1932).—J.F.O.

Fourdrinier Paper Machine. Gumal Knopp, Berlin. Ger. pat. 585,147 (Oct. 17, 1929).—With the ordinary stock inlet, the fibers lay in the sheet mostly in the machine direction, and so the idea of this invention is to make a sheet in which the fibers lie both with and across machine direction. To accomplish this the stock inlet chest extends onto the wire, there being an agitator in the chest and three dams, and to hold the stock at the other end a large roll rotates directly above the breast roll.—J.F.O.

Device for the Winding of a Web of Paper. Ivan Kruomel, Bloemendaal, Holland. Ger. pat. 585,974 (June 7, 1930).—J.F.O.

Process for the Mechanical Removal of Impurities from Pulp and Other Fiberous Masses. Aleks Lampen, Helsingfors. Finn. pat. 15,216 (April 9, 1931).—The diluted suspension of pulp is sprayed onto a screen whose openings are of such a size that the water and impurities go through but the fibers remain.—J.F.O.

Arrangement for the Loading and Unloading of a Multiple Platform Press for the De-Watering, Drying or Pressing of Wet Boards of Fiberous Material and Similar Substances. G. Siempelkamp & Co., Krefeld, Germany. Finn. pat. 15,238 (June 28, 1932).—J.F.O.

Process and Arrangement for the Laying and Packing of Single Sheets of Paper. G. Spiess, Leipzig. Swed. pat. 77,728 (Aug. 8, 1930).—J.F.O.

Process and Arrangement for the Removal of the Process Liquids of all Kinds, Especially Bleach Liquor, from Fiber Suspensions especially Pulp, Circulating with Varying Speed. Zellstofffabrik Waldhof & W. Leupold, Mannheim. Ger. pat. 586,205 (March 15, 1931).—The separation takes place by centrifuging or pressing against a filter surface, whereby the liquid is removed and the stock continues in circulation.—J.F.O.

Press and Valve Arrangement for Digesters Operating Continuously. Felix Goebl & Sixten M. Hjelte, Altfeld. Ger. pat. 586,302 (Aug. 14, 1930).—The cooked stock from the "V"-shaped bottom of the digester passes between two rolls, which are under pressure and revolve in such a manner that they convey stock from the digester.—J.F.O.

IMPORTS OF PAPER AND PAPER STOCK

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING JUNE 9, 1934

CIGARETTE PAPER

Standard Products Corp., Paris, Havre, 5 cs.; H. H. Strauss, Indep. Hall, Bordeaux, 293 cs.; American Tobacco Co., Indep. Hall, Bordeaux, 300 cs.; Champagne Paper Corp., Indep. Hall, St. Nazaire, 454 cs.

WALL PAPER

W. H. S. Lloyd & Co., Amer. Farmer, London, 2 bls.; R. F. Downing & Co., Carinthia, Southampton, 1 ble.

PAPER HANGINGS

W. H. S. Lloyd & Co., Amer. Farmer, London, 3 bls., 1 cs.

NEWS PRINT

Jay Madden Corp., Stuttgart, Bremen, 132 rolls; News Syndicate Co. Inc., Humberarm, Dalhousie, 2,066 rolls; World Telegram, Humberarm, Dalhousie, 1,614 rolls; Brooklyn Daily Eagle, Humberarm, Dalhousie, 209 rolls; Jay Madden Corp., Scanpenn, Wiborg, 792 rolls; ——, Pr. Harding, Hamburg, 87 rolls.

WRAPPING PAPER

R. McBratney Co. Inc., Laconia, Liverpool, 2 cs.; Walker Goulard Plehn Co., Scanpenn, Helsingfors, 712 rolls.

FILTER PAPER

H. Reeve Angel & Co. Inc., Carinthia, Southampton, 3 cs.; J. Manheimer, Olympic, Southampton, 125 bls., 1 cs.

DRAWING PAPER

Favor Ruhl & Co., Amer. Farmer, London, 3 cs.

COLORED PAPER

Tamm & Co., Dakotian, Antwerp, 1 cs.; International F'd'g Co., Deutschland, Hamburg, 9 cs.

SURFACE COATED PAPER

Gevaert Co. of America, Dakotian, Antwerp, 26 cs.; Phoenix Shipping Co., Deutschland, Hamburg, 2 rolls; Metropolitan Imp't'g & Man'f'g Co., Pr. Harding, Hamburg, 11 cs.

COATED PAPER

Chas. Happel, Deutschland, Hamburg, 4 cs.

DECALCOMANIAS

L. A. Consmiller, Deutschland, Hamburg, 4 cs.; Sellers Transportation Co., Deutschland, Hamburg, 27 cs.

DECALCOMANIA PAPER

B. F. Drakenfeld & Co., Laconia, Liverpool, 3 cs. (simplex); B. F. Drakenfeld & Co., Laconia, Liverpool, 30 cs. (duplex).

TISSUE PAPER

B. F. Drakenfeld &Co., Laconia, Liverpool, 7 cs.; Saks & Co., Paris, Havre, 2 cs.

LITHO PAPER

B. Meiners Co., Toba Maru, Hong Kong, 10 cs.

STENCIL PAPER

Weiss F'd'g Co., Deutschland, Hamburg, 2 cs.; American Indicator Paper Co., Toba Maru, Kobe, 2 cs.

CARD BOARD

Safran & Glucksman, Rotterdam, Rotterdam, 5 cs.

MISCELLANEOUS PAPER

T. N. Fairbanks, Tai Shan, Yokohama, 8 cs.; Steiner Paper Corp., Rotterdam, Rotterdam, 5 cs.; ——, Black Hawk, Antwerp, 8 cs.; Marshall Field & Co., Paris, Havre, 2 cs.; Meadows Wye & Co., Deutschland, Hamburg, 9 bls.; Keuffel & Esser Co., Pr. Harding, Hamburg, 19 cs.

RAGS, BAGGINGS, ETC.

Banco Coml. Italiane Trust Co., Estrella, Barcelona, 199 bls. rags; National City Bank, Estrella, Valencia, 102 bls. rags; 1st Natl. Bank of Boston, Kwansai Maru, Kobe, 60 bls. rags; C. Comiter Co., Pipestone County, Dunkirk, 54 bls. thread waste, Walker Goulard Plehn Co., Pipestone County, Havre, 16 bls. rags; Chase National Bank, Stuttgart, Bremen, 118 bls. jute waste; Chase National Bank, Black Hawk, Antwerp, 160 bls. cotton waste; Castle & Overton, Inc., Black Hawk, 39 bls. bagging; Darmstadt Scott & Courtney, Black Hawk, Antwerp, 288 bls. jute waste; W. Steck & Co., Black Hawk, Antwerp, 103 bls. flax waste; G. W. Millar & Co., Black Hawk, Antwerp, 190 bls. flax waste; J. J. Ryan & Son, Black Hawk, Antwerp, 51 bls. cotton waste; N. Schwab & Son, Black Hawk, 37 bls. cotton waste; E. J. Keller Co., Inc., Black Hawk, ——, 22 bls. rags; E. J. Keller Co., Inc., Black Hawk, ——, 122 bls. bagging; ——, Carinthia, Southampton, 54 bls. rags; Chase National Bank, Cold Harbor, Dundee, 163 bls. paper stock; E. J. Keller Co., Inc., Cold Harbor, ——, 83 bls. paper stock; Amtorg Trading Corp., Dimitrov, Leningrad, 2855 bls. rags; T. D. Downing & Co., Caledonia, Glasgow, 46 bls. bagging; Banco Coml. Italiane Trust Co., Isarco, Genoa, 125 bls. bagging; E. J. Keller Co., Inc., City of Flint, ——, 36 bls. flax waste; E. J. Keller Co., Inc., Deutschland, ——, 44 bls. rags.

CHINA CLAY

C. T. Wilson Co., Inc., Laconia, Liverpool, 25 casks.

CASEIN

D. C. Andrews & Co., Deutschland, Hamburg, 50 bags.

Wood Pulp

Pagel Horton & Co., Inc., Greisheim, Ornskoldsvik, 153 bls. sulphate, 25 tons; ———, Greisheim, Hernosand, 600 bls. sulphite, 100 tons; Perkins Goodwin & Co., Greisheim, Sundsvall, 300 bls. sulphite; Perkins Goodwin & Co., Greisheim, Sundsvall, 450 bls. sulphate; Bulkley Dunton & Co., Greisheim, ———, 1000 bls. chemical pulp; Bank of N. Y. Trust Co., Greisheim, Norrsundet, 2500 bls. sulphate; Pagel Horton & Co., Inc., Greisheim, Gefle, 750 bls. sulphite; ———, Dalhem, Stugsund, 875 bls. sulphite, 175 tons; ———, Dalhem, Stugsund, 675 bls. sulphate, 125 tons; Johaneson, Wales & Sparre, Inc., Dalhem, Sundsvall, 3223 bls. sulphite, 654 tons; Johaneson, Wales & Sparre, Inc., Dalhem, Sundsvall, 375 bls. chemical, 76 tons; Johaneson, Wales & Sparre, Inc., Dalhem, Sundsvall, 600 bls. sulphate, 101 tons; Bulkley Dunton & Co., Dalhem, ———, 2950 bls. woodpulp, 504 tons; ———, Dalhem, Hernosand, 3900 bls. sulphate, 650 tons; Lagerloef Trading Co., Scanpenn, Helsingfors, 1021 bls. sulphite, 170 tons; E. J. Keller Co., Inc., Scanpenn, ———, 326 bls. wood pulp, 50 tons; Bank of N. Y. Trust Co., Deutschland, Hamburg, 945 bls. wood pulp, 189 tons; Castle & Overton, Inc., Deutschland, Hamburg, 140 bls. wood pulp, 28 tons.

PORTLAND IMPORTS

Week Ending June 9, 1934

Bulkley Dunton & Co., Greisheim, ———, 1000 bls. wood pulp; Gottesman & Co., Inc., Greisheim, Sweden, 2875 bls. wood pulp; Gottesman & Co., Inc., Minnequa, Sweden, 5150 bls. wood pulp.

BOSTON IMPORTS

Week Ending June 9, 1934

Ayres W. C. Jones Co., Pipestone County, Havre, 47 bls. cotton waste; Bulkley Dunton & Co., Dalhem, ———, 3025 bls. wood pulp, 604 tons; Johaneson Wales & Sparre, Inc., Dalhem, Sundsvall, 1090 bls. sulphite, 210 tons; Johaneson Wales & Sparre, Inc., Dalhem, Sundsvall, 125 bls. chemical, 25 tons; Johaneson Wales & Sparre, Inc., Dalhem, Sundsvall, 600 bls. sulphate, 100 tons; Perkins Goodwin & Co., Dalhem, Sundsvall, 1000 bls. sulphite, 203 tons; Bank of Manhattan Co., Dalhem, Sundsvall, 150 bls. sulphate, 25 tons; Atkinson Haserick & Co., Pr. Garfield, Genoa, 2 cs. wrapping paper; G. F. Malcolm Co., Inc., Laconia, Liverpool, 9 cs. tissue paper; American Express Co., Laconia, Liverpool, 14 cs. drawing paper; Bulkley Dunton & Co., Greisheim, ———, 125 bls. wood pulp.

CAMDEN IMPORTS

Week Ending June 9, 1934

Bulkley Dunton & Co., Dalhem, ———, 600 bls. wood pulp, 101 tons; Bank of Manhattan Co., Dalhem, Hernosand, 1800 bls. sulphate, 300 tons.

PHILADELPHIA IMPORTS

Week Ending June 9, 1934

E. J. Keller Co., Inc., Pipestone County, ———, 103 bls. new cuttings; E. J. Keller Co., Inc., Pipestone County, ———, 554 bls. rags; Castle & Overton, Inc., Pipestone County, Dunkirk, 46 bls. rags; Castle & Overton, Inc., Pipestone County, Havre, 39 bls. rags; J. M. Marris, Pipestone County, Havre, 9 cs. filter paper; ———, Etna, Sundsvall, 3000 bls. sulphite; ———, Etna, Wallvik, 300 bls. sulphite; ———, Etna, Husum, 12,280 bls. sulphate; ———, Wido, Hamburg, 2135 bls. wood pulp; Johaneson Wales & Sparre, Inc., Dalhem, Sundsvall, 3180 bls. sulphite, 547 tons; Bulkley Dunton & Co., Dalhem, ———, 500 bls. wood pulp, 101 tons; E. J. Keller Co., Inc., Black Hawk, ———, 321 bls. rags; Union Waste Co., Black Hawk, Antwerp, 22 bls. rags; Castle & Overton, Inc., Argentino, B. Ayres, 144 bls. rags; H. G. Lichtenstein, Indep. Hall, Bordeaux, 85 bls. rags; Castle & Overton, Inc., Indep. Hall, St. Nazaire, 272 bls. rags; Phila. National Bank, Indep. Hall, St. Nazaire, 81 bls. rags; E. J. Keller Co., Inc., Indep. Hall, ———, 204 bls. rags.

BALTIMORE IMPORTS

Week Ending June 9, 1934

———, Alberta, Trieste, 186 bls. rags; ———, Dalhem, Stugsund, 750 bls. sulphite, 150 tons; Mead Sales Co., Inc., Dalhem, Sundsvall, 3000 bls. sulphite, 508 tons; Johaneson Wales & Sparre, Inc., Dalhem, Sundsvall, 300 bls. sulphite, 50 tons; Congoleum-Nairn Co., Indep. Hall, Bordeaux, 542 bls. rags; Congoleum-Nairn Co., Indep. Hall, St. Nazaire, 248 bls. rags.

NORFOLK IMPORTS

Week Ending June 9, 1934

Darmstadt Scott & Courtney, Black Hawk, Antwerp, 76 bls. flax waste; Bulkley Dunton & Co., Titania, ———, 1100 bls. wood pulp.

NEWPORT NEWS IMPORTS

Week Ending June 9, 1934

Bulkley Dunton & Co., Ditmar Koel, ———, 6700 bls. wood pulp.

HOUSTON IMPORTS

Week Ending June 9, 1934

Darmstadt Scott & Courtney, Alberta, Venice, 132 bls. bagging; Bano Coml. Italiane Trust Co., Alberta, Trieste, 143 bls. bagging.

Adolph Warshow Addresses Paper Salesmen

There was an excellent attendance at the regular weekly luncheon and meeting of the Eastern Division of the Salesmen's Association of the Paper Industry, which was held in the Tavern Room of the Hotel Commodore, New York, on Monday last. Chairman J. K. Hutchison, Jr., of the Allied Paper Mills, Inc., reported the acquisition of three new members during the past week.

Adolph Warshow, president of the Majestic Paper Company, and chairman of the Sulphite Bond Group of Paper Merchants, gave an exceptionally interesting address on the operation of the paper distributors code in New York. H. P. Price, of A. Price & Son, code administrator, also enlightened those present on the problems to be overcome.

William B. McGoldrick, chairman of the Golf Committee, announced that the next Golf Outing of the association would be held at the Winged Foot Golf Club, Mamaroneck, N. Y., N. Y., on Thursday, June 21. After the great success of the previous outing a few weeks ago, it is felt that there will be an excellent turn-out of members and guests for this enjoyable event.

Container Corp. to Spend $450,000

In the issue of the Paper Trade Journal of May 24, 1934, on page 25, it was stated that the Container Corporation of America, Fountain and Nixon streets, Philadelphia, had plans under way for addition to its power plant, including improvements in the present station, the entire project to cost over $45,000. The amount was obviously in error. It should have been $450,000.

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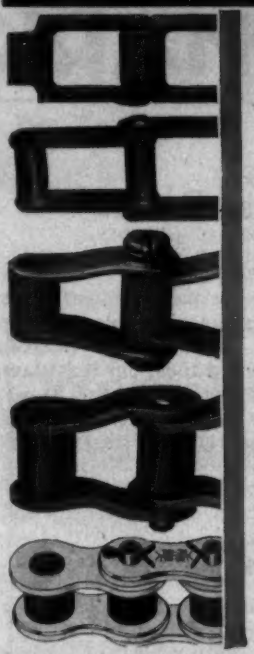

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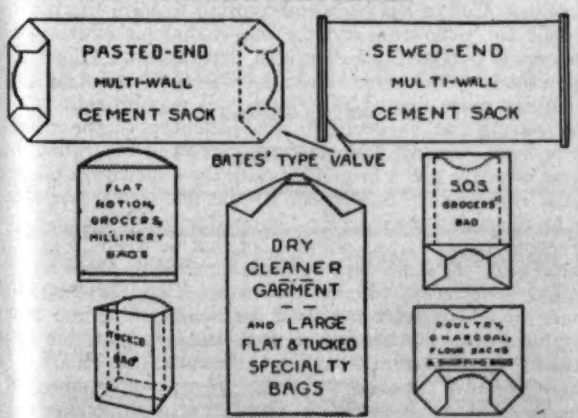
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New York Market Review

Office of the PAPER TRADE JOURNAL
Wednesday, June 13, 1934.

Some confusion was created in the paper industry last week through the N.R.A. announcement of its attitude towards price provisions. The situation was cleared, however, last Friday, when all paper and pulp manufacturers in the United States were notified by the Paper Industry Authority that the new policy does not affect present practices under the administration of the General Pulp and Paper Code and that members of the industry must comply with all provisions of the Code until it had been amended by administrative order or until the revised Code has been approved.

The position of the local paper market is practically unchanged. Demand for the various standard grades of paper is irregular at present, due to seasonal causes. Sales forces of the leading paper organizations are still actively campaigning and are hopeful of a sharp revival of trading towards the Fall of the year.

Conditions in the newsprint paper market are improving. Demand from the publishers is fairly persistent. Production in the United States, Canada, and Newfoundland is being maintained in good volume to take care of increased consumption. Stocks at the mills are not excessive. The price situation is more encouraging.

The fine paper market is fairly steady. Demand for book papers is better, in some instances, but cover papers are slightly less active. Prices are holding to schedule. Tissues are moving freely. The coarse paper market is displaying strength and summer specialties are in seasonal request. The paper board market is rather quiet.

Mechanical Pulp

Steadiness prevails in the ground wood paper market. Manufacturing operations in the United States, Canada and abroad are practically keyed to consumption, and the statistical position of the industry is sound. Prices are generally holding to previously quoted levels and reports of shading are infrequent.

Chemical Pulp

With shipments from the Scandinavian countries arriving in heavy volume, demand for the various grades of chemical pulp has eased up slightly. Prices are holding to schedule, without difficulty, and the outlook for the future is encouraging. Domestic and foreign bleached sulphite is still quoted at from $2.75 to $2.85 per 100 pounds.

Old Rope and Bagging

The domestic old rope market is listless. Demand for both imported and domestic old manila rope continues light. Small mixed rope is dull. Old rope prices are easier. The bagging market is spotty. Little interest is being displayed in scrap and gunny bagging, although there is some seasonal request for roofing bagging.

Rags

Paper mill demand for domestic rags is restricted. New cotton rags are rather quiet, although there is a fair export inquiry for No. 1 white shirt cuttings and fancy shirt cuttings. Roofing grades are in better request than of late. The imported rag market is still affected by the foreign exchange situation.

Waste Paper

The paper stock market is only moderately active. Board mill demand for the lower grades is light. Quotations on strictly folded news and No. 1 mixed paper are steadier. No. 1 white news is slightly softer. The better grades of waste paper are holding up well, especially hard and soft white shavings and white envelope cuttings.

Twine

Business in the local twine market is rather dull. Demand for the various grades has eased off with the advent of warmer weather. The outlook for livelier trading in the Autumn, however, is considered bright by most competent observers. Prices are generally maintained at formerly quoted levels, and reports of concessions are scarce.

Tax Eliminated on Multi-Wall Bags

[FROM OUR REGULAR CORRESPONDENT]

OSWEGO, N. Y., June 11, 1934—A processing tax on multi-wall paper bags was eliminated this week by an order of the Federal Department of Agriculture following a vigorous argument by Representative Francis D. Culkin, of this city, in which he declared that paper mills in Northern New York had been seriously affected. Congressman Culkin has been endeavoring to have the tax removed for some time and the report that his efforts were successful created considerable enthusiasm. The tax amounted to $40 a ton of paper or $9 a thousand on bags weighing more than 2,000 pounds. It was brought out at the hearing that Taggert Brothers, producers of paper bags, have been running under a handicap since the ruling became effective and a brief filed with the department alleged great injustice. Abolishment of the tax is also expected to be of great benefit to the Union Bag and Paper Co., of Hudson Falls. It was pointed out that between 10 and 15 per cent of the multi-wall business handled by that concern would be affected by the new rule. Bags of this kind made by that concern are used for holding lime and other products. At the hearing it was stated that at this time cement manufacturers have a differential of 15 cents a barrel against paper containers. For example, the purchaser of a barrel of cement pays 15 cents more for it in paper containers than in cotton cloth sacks provided the sacks are returned for credit. Prominent business men claim that the paper industry in this section would have been hard hit if the tax had been retained. It is now felt that the dispensing of the tax will stimulate business in many paper and bag plants and those that have been operating on curtailed schedules for some time may be able to return to normal operations soon.

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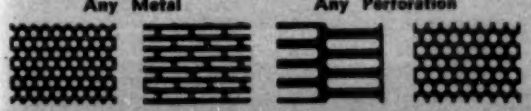

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Miscellaneous Markets

Office of the PAPER TRADE JOURNAL
Wednesday, June 13, 1934.

BLANC FIXE.—Demand for blanc fixe is moderately active. Prices are holding to formerly quoted levels. The pulp is selling at from $42.50 to $45 per ton, in bulk; while the powder is offered at from 3½ to 3¾ cents per pound, in barrels, at works.

BLEACHING POWDER.—The bleaching powder market is marking time at present. Contract shipments are moving in fair volume for the season. Prices remain unchanged. Bleaching powder is quoted at from $1.90 to $2.15 per 100 pounds, in drums, at works.

CASEIN.—The casein market is firmer. Domestic standard ground is quoted at 12½ cents and finely ground at 13 cents per pound. Argentine standard ground is selling at 13½ cents and finely ground at 14 cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—Steadiness prevails in the caustic soda market. The contract movement is normal. Solid caustic soda is still quoted at from $2.60 to $3.10; while the flake and ground are selling at from $3 to $3.05 per 100 pounds, in large drums, at works.

CHINA CLAY.—The china clay market is fairly buoyant. Prices are generally holding to schedule. Imported china clay is quoted at from $13.50 to $21 per ton, ship side; while domestic paper making clay is selling at from $5 to $12 per ton, at works.

CHLORINE.—Paper mill demand for chlorine is fairly persistent. The contract movement is well up to average. Prices remain unchanged. Chlorine is quoted at from $2 to $2.25 per 100 pounds, in tanks, or multi-unit cars, in ton lots, or over, at works.

ROSIN.—The rosin market is slightly easier. The grades of gum rosin used in the paper mills are quoted at from $5.65 to $5.85 per 280 pounds, in barrels, at works; while wood rosin is selling at $4.70 per 280 pounds, in barrels, at southern shipping points.

SALT CAKE.—Conditions in the salt cake market are satisfactory. Prices are steady. Salt cake is quoted at from $12 to $14 and chrome salt cake at from $12 to $12.50 per ton, at works. Imported salt cake is selling at from $12 to $12.50 per ton, on dock.

SODA ASH.—The position of the soda ash market is practically unchanged. Contract shipments are moving regularly. Prices are firm. Quotations on soda ash, in car lots, at works, are as follows: in bulk, $1.10; in bags, $1.40; and in barrels, $1.50.

STARCH.—Due to the decline in the basic products, quotations on starch are easier. Contract shipments are moving freely. Special paper making starch is now quoted at $2.80 per 100 pounds, in bags; and at $3.08 per 100 pounds, in barrels, at works.

SULPHATE OF ALUMINA.—Trading in the sulphate of alumina market is fairly brisk. Prices are holding to schedule. Commercial grades are quoted at from $1.35 to $1.50; while iron free is selling at from $1.90 to $2.05 per 100 pounds, in barrels, at works.

SULPHUR.—The sulphur market continues steady. Sulphur is quoted at $18 per long ton on orders of 1,000 tons, or over, on yearly contracts; and at $20 per ton on any smaller quantity over that period. On spot and nearby car loads, the quotation is $21 per ton.

TALC.—Most of the business transacted in the talc market during the past week was along routine lines. Domestic talc is still quoted at from $16 to $18 per ton, in bulk, at eastern mines; while imported talc is selling at from $23 to $30 per ton, on dock.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	6.50	@	—
Bonds	6.00	@	—
Index	6.00	@	—
Writings—			
Extra Superfine	6.50	@	—
Superfine	6.25	@	—
Tub sized	5.75	@	—
Engine sized	5.50	@	—
Book, Cased—			
S. & S. C.	5.35	@	5.75
S. & S. C. Litho.	5.60	@	6.00
M. F.	5.10	@	5.50
Coated and Enamel	5.90	@	6.55
Coated Litho	5.90	@	6.55
Tissues—Per Ream—			
White No. 1	.82½	@	.85
White No. 2	.67½	@	—
Anti-Tarnish M. G. only	1.00	@	—
Colored	.85	@	—
Kraft	.70	@	—
Manila	.67½	@	.70
Manila—			
No. 1 Jute	9.00	@	9.25
No. 2 Jute	7.75	@	8.50
No. 1 Wood	4.00	@	5.25
No. 2 Wood	3.50	@	4.00
Butchers	4.00	@	4.50
Fibre Papers—			
No. 1 Fibre	4.25	@	5.50
No. 2 Fibre	4.00	@	4.75
Common Bogus	1.50	@	3.00
Screenings	2.50	@	3.50
Glassine—			
Bleached	.11	@	—
Unbleached	.09	@	—

(The following Quotations are Delivered New York)

News, per ton—			
Roll, contract	40.00	@	—
Rolls, spot	40.00	@	—
Sheets	45.00	@	—
Kraft—			
No. 1 Domestic	4.75	@	5.00
No. 2 Domestic	3.87½	@	—
Southern	3.87½	@	—
Boards—per ton—			
News	45.00	@	50.00
Chip	42.50	@	47.50
Sgl. Mla. Ll. Chip	52.50	@	55.00
Jute Lined Chip	52.50	@	55.00
White Patent Coated	65.00	@	70.00
Binders Boards	68.00	@	72.00

Mechanical Pulp

(On Dock, Atlantic Ports)

No. 1 Imported—			
Moist	27.00	@	29.00
Dry	27.00	@	30.00

(F.o.b. Mill)

No. 1 Domestic and Canadian	24.00	@	39.00

Chemical Pulp

(On Dock, Atlantic, Gulf and West Coast Ports)

Bleached Sulphite (Domestic and Foreign)—			
Division 1	2.85	@	—*
Division 2	2.80	@	—*
Division 3	2.75	@	—*
Prime Qualities—			
Class 1. All Prime Easy Bleaching	2.25	@	—*
Other Than Easy Bleaching—			
Class 2. Higher Than Standard	2.20	@	—*
Class 3. Standard	2.15	@	—*
Class 4. Lower than Standard	2.10	@	—

(On Dock, Atlantic Ports)

Kraft No. 1	1.85	@	1.90
Kraft No. 2	1.60	@	1.70

(F.o.b. Pulp Mill)

Kraft Domestic	1.60	@	2.75
(Delivered)			
Soda Bleached	2.50	@	—

*Add 60 Cents per short ton, dock charges, for Albany; $2.00 for Lake Ports East and $3.00 for Lake Ports West of Mackinac Straits.

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—			
New White, No. 1	6.50	@	7.00
Silesias No. 1	4.25	@	4.50
New Unbleached	6.75	@	7.25
New Soft Blacks	3.00	@	3.25
Blue Overall	4.00	@	4.25
Fancy	2.50	@	2.75
Washables	1.75	@	2.00
Mixed Khaki Cuttings	3.00	@	3.25
O. D. Khaki Cuttings	3.75	@	4.00
Men's Corduroy	1.50	@	1.75
New Mixed Blacks	2.50	@	2.75

Old Rags

White, No. 1—			
Repacked	3.00	@	3.50
Miscellaneous	2.75	@	3.25
White, No. 2—			
Repacked	1.75	@	2.25
Miscellaneous	1.50	@	1.75
Thirds and Blues—			
Repacked	1.50	@	1.75
Miscellaneous	1.25	@	1.50
Black Stockings	2.50	@	3.00
Roofing Rags—			
No. 1	1.10	@	1.25
No. 2	.80	@	.85
No. 3	.70	@	.75
No. 4	.65	@	.70
No. 5A	.60	@	.65

Foreign Rags

New Rags

New Dark Cuttings	1.60	@	1.70
New Mixed Cuttings	1.75	@	1.85
New Light Silesias	3.75	@	4.00
Light Flannelettes	3.75	@	4.00
Unbleached Cuttings	6.50	@	6.75
New White Cuttings	6.50	@	6.75
New Light Oxfords	3.25	@	3.50
New Light Prints	2.75	@	3.00

Old Rags

No. 1 White Linens	7.50	@	8.00
No. 2 White Linens	6.50	@	7.00
No. 3 White Linens	4.50	@	5.00
No. 4 White Linens	2.25	@	2.50
No. 1 White Cotton	4.25	@	4.75
No. 2 White Cotton	3.25	@	3.75
No. 3 White Cotton	2.50	@	2.75
No. 4 White Cotton	1.90	@	2.15
Extra Light Prints	2.00	@	2.25
Ord. Light Prints	1.75	@	1.85
Med. Light Prints	1.55	@	1.65
Dutch Blue Cottons	1.75	@	1.85
French Blue Linens	2.30	@	2.40
German Blue Linens	2.15	@	2.25
German Blue Cottons	1.70	@	1.80
Checks and Blues	1.30	@	1.40
Linsey Garments	1.40	@	1.60
Dark Cottons	1.10	@	1.25
Old Shopperies	1.00	@	1.10
New Shopperies	.90	@	1.00
French Blues	1.70	@	1.80

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—			
Foreign	1.50	@	1.60
Domestic	1.40	@	1.50
Wool Tares, light	1.20	@	1.30
Wool Tares, heavy	1.25	@	1.35
Bright Bagging	1.20	@	1.30
Manila Rope—			
Foreign	2.40	@	2.50
Domestic	2.50	@	2.75
Small Mixed Rope	1.10	@	1.35
New Burlap Cut	2.00	@	2.25
Hessian Jute Threads—			
Foreign	2.60	@	2.75
Domestic	2.80	@	3.00

Old Waste Papers

(F. o. b. New York)

Shavings—			
White Envelope Cuttings	2.70	@	2.80
Ordinary Hard White No. 1	2.15	@	2.25
Hard White No. 2	1.95	@	2.05
Soft White No. 1	1.85	@	1.95
Flat Stock—			
Stitchless	.80	@	.90
Over issue Mag.	.80	@	.90
Solid Flat Book	.65	@	.75
Crumpled No. 1	.60	@	.65
Solid Book Ledger	1.50	@	1.65
Ledger Stock	1.00	@	1.10
New B. B. Chips	.30	@	.35
Manilas—			
New Env. Cut	1.70	@	1.80
New Cuttings	1.35	@	1.45
Print	Nominal		
Bogus Wrapper	.40	@	.50
Container	Nominal		
Old Kraft Machine—			
Compressed bales	1.10	@	1.20
News—			
No. 1 White News	1.00	@	1.10
Strictly Overissue	.65	@	.70
Strictly Folded	.35	@	.45
No. 1 Mixed Paper	.20	@	.25

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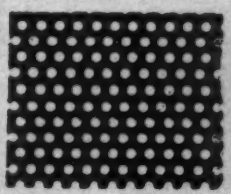

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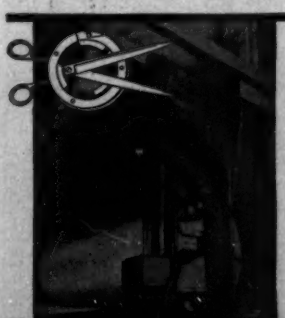

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Twines
(F. o. b. Mill)

Cotton—			
B. C. 18 basis	.30	@	.32
No. 1	.20	@	.22
No. 2	.19	@	.20
No. 3	.17	@	.18
A. Italian, 18 basis	.36	@	.37
Finished Jute—			
Dark, 18 basis	.18	@	.20
Light, 18 basis	.20	@	.22
Jute Wrapping, 3-6 Ply—			
No. 1	.15½	@	.16½
No. 2	.15	@	.16
Tube Rope—			
4-ply and larger	.09¼	@	.09¾
Fine Tube Rope—			
4-ply	.11¼	@	.11¾
3-ply	.14¼	@	.14¾
2-ply	.14¾	@	.14¾
Paper Makers Twine	.08½	@	.13½
Box Twine, 2-3 ply	.14½	@	.14¾
White Hemp	.13¾	@	.16¾
Java Sisal—			
No. 1 Basis	.11½	@	—
No. 2 Basis	.10½	@	—
New Zealand Sisal	.11½	@	—
Sisal Lath Yarn—			
No. 1	.13½	@	.13½
No. 2	.11½	@	.13½
Manila Twine	.24½	@	.29½

CHICAGO

Paper
(F. o. b. Mill)

Rag Bond	.12	@	.50
Water Marked Sulphite Bond	.06½	@	.11
Sulphite Bond	.05½	@	.11
Superfine Writing	.18	@	.24
No. 1 M. F. Book	.06½	@	.07¾
No. 2 M. F. Book	.05½	@	.06¾
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07	@	.12
Coated Label	.07	@	.08½
No. 1 Manila	.04¼	@	.05½
No. 1 Fibre	.04¾	@	.05¼
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.03¼	@	.03¾
No. 1 Kraft	4.75	@	5.00
Southern Kraft	3.88	@	4.25
No. 2 Kraft	3.88	@	4.25
Wood Tag Boards	.04¼	@	.04½
Sulphite Screenings	.03	@	.03¼
Manila Tissue	.05¾	@	.07
White Tissue	.07	@	.09
(Delivered Central Territory)			
News, per ton—			
Rolls, contract	41.00	@	—
Sheets, open	46.00	@	51.00
Boards, per ton—			
Plain Chip	46.50	@	—
Solid News	50.00	@	—
Manila Lined Chip	55.00	@	—
Patent coated	65.00	@	—
Container Lined—			
85 Test, per 1000 sq. ft.			1.70
100 Test, per 1000 sq. ft.			1.85

Old Papers
(F. o. b. Chicago)

Shavings—			
No. 1 White Envelope cuttings	1.70	@	2.00
No. 1 Hard White	1.40	@	1.65
No. 1 Soft White	1.25	@	1.50
Ledger & Writings	.70	@	.80
Solid Books	.60	@	.70
Blanks	1.00	@	1.05
Krafts	.80	@	.90
New Kraft Cuts	1.20	@	1.30
Manila Env. Cuts	1.25	@	1.30
Ex. No. 1 Manila	.90	@	1.00
Print Manila	.50	@	.55
Overissue News	.60	@	.70
Old Newspapers—			
No. 1	.50	@	.55
Mixed Papers—			
No. 1	.30	@	.35
Roofing Stocks—			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper
(Delivered Philadelphia)

Bonds	.05-9/10	@	.38
Ledgers	.06 9/10	@	.40
Superfine	.10	@	.18
Extra Fine	.15	@	.20
Fine	.15	@	.20
Fine No. 3	.10	@	.25
Fine No. 3	.05	@	.06
Book, M. F.	.05¼	@	.06¾
Book, S. S. & C.	.05	@	.07½
Book, Coated	.06½	@	.09
Coated Lithograph	.06¾	@	.08½
Label	.07	@	.11
No. 1 Jute Manila	6.25	@	—
Manila Sul., No. 1	5.25	@	—
Manila No. 2	3.00	@	—
No. 1 Kraft	5.00	@	—
Southern Kraft	4.75	@	—
Common Bogus	.03	@	.04½
News Print Rolls	46.00	@	55.00
Straw Board	40.00	@	45.00
News Board	50.00	@	—
Chip Board	45.00	@	—
Wood Pulp Board	70.00	@	85.00
Binder Boards—			
No. 1, per ton	75.00	@	80.00
No. 2, per ton	70.00	@	75.00
Carload lots	65.00	@	70.00
Tarred Felts—			
Regular	52.25	@	54.25
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.95	@	2.10
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.25

Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.03½	@	.04
New White, No. 2	.02½	@	.04
Light Silesias	.02½	@	.02
Silesias, No. 1	.03	@	.03½
Black Silesias, soft	.02½	@	.02
New Unbleached	.05	@	.05½
Washable, No. 1	.01½	@	.02
Blue Overall	.03½	@	.04
Cottons—According to grades—			
Washable, No. 2	.02½	@	.03
New Blue	.01½	@	.03
Fancy	.01½	@	.03
New Black Soft	.02	@	.04
New Light Seconds	.01½	@	.02
New Dark Seconds	1.50	@	1.75
Khaki Cuttings—			
No. 1 O.D.	.03	@	.04
No. 2 Mixed	.03	@	.04
Corduroy	.02	@	.03
New Canvas	.03¼	@	.04½
New Black Mixed	.02½	@	.03½

Domestic Rags (Old)

White No. 1—			
Repacked	2.50	@	3.50
Miscellaneous	1.75	@	2.25
M. G.	3.00	@	3.75
Thirds and Blues—			
Miscellaneous	1.00	@	1.50
Repacked	1.50	@	2.00
Black Stockings (Export)	2.00	@	3.50
Roofing Stock—			
Foreign No. 1	.50	@	.75
Repacked	.70	@	.85

Bagging
(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.25	@	1.50
Domestic	1.50	@	1.75
Manila Rope	2.00	@	2.25
Sisal Rope	1.25	@	1.50
Mixed Rope	1.00	@	1.10
Scrap Burlaps—			
No. 1	1.25	@	1.30
No. 2	.80	@	1.00
Wool Tares, heavy	2.75	@	—
Mixed Strings	1.15	@	1.25
No. 1 New Light Burlap	2.25	@	2.50
New Burlap Cuttings	2.00	@	2.25

Old Papers
(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	2.25	@	2.30
No. 2 Hard White	2.00	@	2.10
No. 1 Soft White	2.05	@	2.10
No. 2 Soft White	1.50	@	1.60
No. 1 Mixed	.95	@	1.00
No. 2 Mixed	.75	@	.80
Solid Ledger Stock	1.50	@	1.60
Writing Paper	1.25	@	1.50
No. 1 Books, heavy	.90	@	1.00
No. 2 Books, light	.70	@	.80
No. 1 New Manila	1.20	@	1.50
No. 1 Old Manila	.85	@	.90
Print Manila	.75	@	.80
Container Manila	.65	@	.70
Old Kraft	1.00	@	1.10
Common Paper	.35	@	.40
No. 1 Mixed Paper	.40	@	.45
Straw Board Chip	.40	@	.45
Binders Board Chip	.40	@	.45
Corrugated Board	.60	@	.70
Overissue News	.60	@	.65
Old Newspapers	.40	@	.50

BOSTON

Paper
(F. o. b. Mill)

Ledgers—			
Sulphite	.06	@	.12½
Rag Content	.12	@	.30
All Rag	.36	@	.52½
Bonds—			
Sulphite	.05½	@	.11
Rag Content	.12	@	.30
All Rag	.36	@	.65
Writings	.06½	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05½	@	.08½
Book, Coated	.08½	@	.18
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.04¾	@	.05
No. 2 Kraft	.03½	@	.04¾
(F. o. b. Boston)			
Southern Kraft	.03½	@	.04½
(F. o. b. destination in carload lots, f. o. b. mill in less than carload lots.)			
Common Bogus	.02	@	.02¾
(Delivered New England points)			
News Print, rolls	44.50	@	—
Straw Board, rolls	.009	@	35.00
Straw Board in Sheets, basis 35s to 70s	—	@	40.00
Filled News Board	45.00	@	50.00
Chip Board	42.50	@	47.00
Chip Board (Creasing)	45.00	@	—
Single Manila Lined Chip	52.50	@	62.50
Single White, Patent Coated News Board—Bender	62.50	@	72.50
Wood Pulp Board	70.00	@	75.00
Binder Boards	62.00	@	75.00

Old Papers
(F. o. b. Boston)

Shavings—			
No. 1 Hard White	2.20	@	2.35
No. 1 Soft White	1.75	@	2.00
No. 2 Mixed	.75	@	.80
Solid Ledger Books	1.75	@	—
Overissue Ledger Stock	1.15	@	1.30
Mixed Ledgers	.95	@	1.05
No. 1 Books, heavy	.85	@	.95
No. 1 Books, light	.65	@	.75
Crumpled Stitchless			
Book Stock	.50	@	.60
Manila Env. Cuttings	1.25	@	1.30
No. 1 Old Manila	.75	@	.80
White Blank News	.95	@	1.05
No. 1 Kraft	1.00	@	1.10
Manila	.70	@	.75
No. 1 Mixed Papers	.15	@	.20
Print Manila	.40	@	.45
Overissue News	.45	@	.50
Old Newspapers	.35	@	.40
Box Board Chips	.32½	@	.35
Corrugated Boxes	.30	@	.32½
Screening Wrappers	.50	@	.60

Bagging
(F. o. b. Boston)

Manila Rope—			
Foreign	2.00	@	2.12½
Domestic	2.25	@	2.37½
Transmission Rope	—	@	1.25
Mixed Strings	—	@	.40
Jute Rope	1.50	@	1.60
Jute Carpet Threads	.65	@	.70
Gunny No. 1—			
Foreign	1.40	@	1.45
Domestic	1.12½	@	1.17½
Bleachery Burlap	3.00	@	3.25
Scrap Burlap	1.10	@	1.15
Scrap Sisal	.90	@	1.10
Scrap Sisal for shredding	1.00	@	1.25
Wool Tares, heavy	1.25	@	1.30
New Burlap Cuttings	1.25	@	1.50
Australian Wool Pouches	2.25	@	2.30
Heavy Baling Bagging	1.40	@	1.50
Paper Mill Bagging	.90	@	1.10
Bagging No. 2	.50	@	.55

Domestic Rags (New)
(F. o. b. Boston)

Shirt Cuttings—			
New Light Prints	.02	@	.02½
New White No. 1	.06½	@	—
New White No. 2	.04½	@	.05
Silesias No. 1	.04	@	—
New Black Silesias	.02½	@	.03
New Unbleached	.07	@	.07¾
Blue Cheviot	—	@	4.65
Fancy	—	@	.02½
Washable	.02¾	@	—
Cottons—According to grades—			
Blue Overalls	—	@	.03¾
New Black, soft	.04	@	.04½
Khaki Cuttings	.03	@	.03¾
O. D. Khaki	.02¾	@	.03
Corduroy	.01¾	@	.02
New Canvas	—	@	.03
B.V.D. Cuttings	—	@	.06¾

Domestic Rags (Old)
(F. o. b. Boston)

Canvas	.04½	@	
White No 1—			
Repacked	—	@	3.00
Miscellaneous	2.50	@	2.75
White No. 2—			
Repacked	2.00	@	2.75
Miscellaneous	2.00	@	2.25
Twos and Blues	1.25	@	1.50
Thirds and Blues			
Repacked	2.00	@	2.75
Miscellaneous	2.00	@	2.25
Black Stockings	2.25	@	2.50
Roofing Stock			
No. 1	.90	@	.95
No. 2	.70	@	.75
No. 3	.60	@	.65

Foreign Rags
(F. o. b. Boston)

Dark Cottons	.85	@	.95
New White Shirt Cuttings	5.50	@	6.00
Dutch Blues	2.00	@	2.50
New Checks & Blues	2.50	@	3.00
Old Fustians	1.55	@	1.60
Old Linsey Garments	1.25	@	1.35

TORONTO

Paper
(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.10¼	@	—
No. 2 Sulphite	.08½	@	—
No. 1 Colored	.10¾	@	—
No. 2 Colored	.09	@	.10
Ledgers (sulphite)			
Ledgers, No. 1	.34½	@	—
Ledgers, No. 2	.25½	@	—
Writing	.09	@	.09½
Book—			
No. 1 M. F. (Carloads)	6.20	@	—
No. 3 M. F. (Carloads)	5.70	@	—
No. 4 M. F. (carloads)	4.75	@	—
No. 1 S. C. (carloads)	6.65	@	—
No. 3 S. C. (carloads)	6.20	@	—
No. 4 S. C. (carloads)	5.20	@	—
No. 1 Coated and Litho	13.00	@	—
No. 2 Coated and Litho	10.50	@	—
No. 3 Coated and Litho	9.50	@	—
Coated tinted	14.00	@	—
Wrapping—			
Rag Brown	4.25	@	—
White Wrap	2.22½	@	—
"B" Manila	4.75	@	—
No. 1 Manila	5.25	@	—
Fiber	5.25	@	—
Kraft, M. F.	5.75	@	—
Kraft No. 2	5.25	@	—

(F.O.B. Cars Toronto)

News, per ton—			
Rolls (contract)	45.50	@	—
Sheets	50.50	@	—

Pulp
(F. o. b. Mill)

Ground Wood	18.00	@	20.00
Sulphite easy bleaching	40.00	@	—
Sulphite, news grade	38.00	@	—
Sulphite, bleached	50.00	@	55.00
Sulphate	50.00	@	—

Old Waste Paper
(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	2.00	@	2.30
Soft White	1.60	@	1.90
White Blk. News	1.25	@	1.40
Book and Ledger—			
Flat Magazine and Book Stock (old)	.90	@	1.00
Light and Crumpled Book Stock	.80	@	.90
Ledgers and Writings	1.00	@	1.05
Manilas—			
New Manila Cut	1.25	@	1.50
Printed Manilas	.70	@	.60
Kraft	1.25	@	1.50
News and Scrap—			
Strictly Overissue	.80	@	—
Strictly Folded	.60	@	—
No. 1 Mixed Paper	.50	@	—

Domestic Rags
(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.06	@	.06¼
Fancy Shirt Cuttings	.02¾	@	.02¾

BENNETT

TRADE MARK

ROSIN-WAX SIZE

PLIABILITY

While rosin tends to make the sheet hard and brittle, wax imparts a softness and pliability which are very desirable in certain grades of paper and board.

Thus Bennett Rosin-Wax Sizes are used extensively in folding boxboard to secure good bending or creasing. In envelope paper Bennett Rosin-Wax Size will prevent cracking and improve the appearance of the fold. In still other papers, such as coating raw stock and hanging, Bennett Rosin-Wax Sizes will overcome the brittleness and harshness of groundwood pulp, giving a soft, flexible sheet.

(This is one of a series of advertisements dealing with the profitable application of Bennett Rosin-Wax Sizes. Additional information regarding the subjects discussed will be furnished on request.)

BENNETT INCORPORATED

CAMBRIDGE, MASS., U. S. A.

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(Pure TITANIUM Dioxide)

REFRACTIVE INDEX—2.52

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Our laboratory will be glad to assist you in formulating methods of application to insure maximum opacity in your paper.

"McNAMEE" CLAY

Air washed, Pulverized, or Crude.

We manufacture all grades suitable for both filling and coating.

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